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A STUDY OF SOME SIMILARITIES AND DIFFERENCES BETWEEN PLATO'S EDUCATIONAL SYSTEM AND TWENTIETH CENTURY EDUCATION IN THE UNITED STATES

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by

Lavern Perry Snippen

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A STUDY OF SOME SIMILARITIES AND DIFFERENCES BETWEEN PLATO'S EDUCATIONAL SYSTEM AND TWENTIETH CENTURY EDUCATION IN THE UNITED STATES

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ABSTRACT

Statement of the problem. The purpose of this study was to explore Plato's basic educational system as advocated in The Republic and The Laws and to examine some of the similarities of the Platonic system of education and twentieth century concepts of public education in the United States.

Methods and procedures used. After determining the specific problem and its value to the writer and readers, the author studied the Platonic system of education through extensive library research. The Platonic system of education was summarized and identified and then the author through extensive descriptive research tried to identify those similarities which were found in the United States' educational system relative to the Platonic.

Summary of the findings. Plato's influence upon Western thought has been very great. It has been exerted in two main directions: (1) he stressed analysis and objective thought as he originated and developed the institution now called the Academy, and (2) he simultaneously held concern for the less objective as he philosophized about faith, visions, and mysticism to the extent of having influenced early growth of Christianity. Modern education is indebted to Plato. His ideas are progmatic and selectively used in our educational system.

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CHAPTER I

INTRODUCTION, THE PROBLEM, AND DEFINITION OF TERMS USED

I. INTRODUCTION

For twenty-three centuries education has been a vital and continuing problem. One of the earliest and most influential teachers and writers on purposes and procedures in education has been Plato, a Greek aristocrat. He did not, however, teach or establish his school, the Academy, for its own sake. Rather, he acknowledged education to be the best means for social and political reform in his time.

Out of a full lifetime of thought and experience Plato suggested in _The Republic_ and in _The Laws_ a system of public education which to critical twentieth century readers seems incredibly modern. He was well aware of and propounded the idea that education was the implanting in young minds that body of knowledge and those principles and concepts which ". . . the experience of the eldest and the best has agreed to be truly right."[1]

Plato was more than a diagnostician; most of his educational suggestions are perfectly practical, illustrating an uncanny power of predicting ideas and concepts not readily recognized and applied until centuries later. He often anticipated reforms wholly alien to the society

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[1]Benjamin Jowett (trans.), _The Dialogues of Plato_: _The Laws_ (Oxford University Press, 1937), Vol. V, p. 37.

of his time.[2] It is hoped that the reader of this paper will become more aware of the relationship of some of Plato's educational ideas to some that are operative in modern times.

II. THE PROBLEM

Statement of the problem. The purpose of this study is to explore Plato's basic educational system as advocated in The Republic and The Laws and to examine some similarities of the Platonic system of education and twentieth century concepts of public education in the United States.

Importance of the study. The selection of this topic is significant to the writer because she wishes to learn more about Plato and his contributions to modern American schools. The writer believes that readers of this paper may also gain insight into some origins of educational philosophies and practice currently employed in modern public schools. It is believed that this paper will illustrate that while subject matter per se may change greatly, basic educational problems remain in all societies throughout the centuries.

Assumptions and limitations. It is assumed that many of Plato's proposed ideas of education in 2000 B. C. will be very much in evidence in our twentieth century educational system. It is also supposed that many of Plato's ideas, which were so far ahead of his time and are

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[2]Sir Richard Livingstone, Plato and Modern Education (New York: The MacMillan Company, 1944), pp. 5, 6.

currently a part of modern educational thinking, will continue to be incorporated into future educational systems.

This study is limited by both the amount of reference material available to the researcher from area libraries and university libraries. The scope of a seminar paper as contrasted to a thesis is also a limiting factor.

III. DEFINITIONS OF IMPORTANT TERMS

Allegorical. The expression by means of symbolic fictional figures and actions of truths or generalizations about human conduct or experience.

Corybantes. The Corybantic priests believed in the purgative value of music and physical activity. Hysterics were subjected to the music of the pipes, which after exciting them to violent physical activity, produced exhaustion and sleep from which the patients arose calmed in body and mind.

Discipline. A subject that is taught or a field of study; e.g., history, biology, etc.

Dialectic Method. Discussion and reasoning by dialogue as a method of intellectual investigation.

Education. Plato thought that "a good education consists in giving to the body and to the soul all the beauty and all the perfection of which they are capable."[3]

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[3]Fredrick Mayer, Foundations of Education (Columbus: Charles E. Merrill Books, Inc., 1963), p. 5.

Education. John Dewey regards education as a reconstruction of experience which gives meaning to our existence and which aids us in our direction of subsequent experience. Dewey realized the inadequacy of his definition because *experience* is a very broad term of many meanings almost as broad as the term *life*. Thus, we should regard education as a process leading to the enlightenment of mankind.[4]

Eurythmics. The art of harmoneous bodily movement especially through expressive timed movements in response to improvised music.

Leisure Class. The Greeks were not concerned about amassing wealth, although rivalry was a basic factor of their nature. They did not make wealth the measure of superiority. Possession of this world's goods could not insure happiness nor success. Man who is free from grinding drudgery of a livelihood is considered of the leisure class and this is the highest satisfaction for man of that time.

Platonic System of Education. An educational system that is related to or characteristic of Plato's beliefs about education.

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[4]*Ibid*.

CHAPTER II

PLATONIC SYSTEM OF EDUCATION

I. PLATONIC AIMS OF EDUCATION

Plato is quite definite in his interpretation of educational aims. He believed that education means much more than imparting information. It involves redirection of the whole personality. In modern times, education is equivalent to conversion, the turning of the soul towards the light which heretofore has been unperceived. Plato states this emphatically:

> Our present argument shews us that there is a faculty residing in the soul of each person, and an instrument enabling each of us to learn; and that, just as we might suppose it is impossible to turn the eye round from darkness to light without turning the whole body, so must this faculty of this instrument, be wheeled round, in company from the perishing world, until to be enabled to endure the contemplation of the world, and the brightest part thereof, which according to us is the Form of Good. Hence, this very process of revolution must give rise to an art, teaching in what way the change will most easily and most effectively be brought about. Its object will not be able to generate in the person the power of seeing. On the contrary, it assumes that he possesses it, though he is turned in the wrong direction, and does not look toward the wrong direction, and does not look toward the right quarter; and its aim is to remedy this defect.[1]

This redirection of the soul must be achieved by turning it toward the right objects, accomplishable because there is something in the nature of the soul to assist one's efforts. It is the very essence

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[1]Plato, The Republic (Great Books of the Western World), Vol. VII. (Chicago, 1952), §518.

of the soul to be imitative. Surround it with the right kind of environment and it will begin to assimilate itself. The main problem of education is how to provide the individual with the right kinds of environment. In Plato's program, emphasis is upon placing learners in the midst of surroundings which include values, objects, and things that reflect, what we desire him to become.[2]

Plato aimed at good citizenship. Plato's school was a place for preparing citizens. In Plato's time, military service was neither first nor as important as it had been in earlier days. Civic affairs were given preference. Citizenship was the possession of those who had a proper system of values, profound knowledge, and understandings leading to wisdom, and service to their fellow men and to the state. Citizenship for Plato was synonymous with constructive participation in politics and society. Civic ability was an outcome of education; it could be achieved as the end product of a process of intellectual formation. There is a preference for an elite to be Plato's choice of those to be educated and who would later become leaders.[3]

> The aim of the best kind of education for Plato is the guidance of the young people to leadership or philosopher-kingship, and in the course of this process moulding is essential.[4]

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[2]S. J. Curtis and M. E. A. Boultwood, A Short History of Educational Ideas (London: University Tutorial Press, Ltd., 1958), p. 9.

[3]Plato, The Republic, op. cit., §558.

[4]David Lawson, "Two Views of the Child's Education for Freedom," Educational Forum (March, 1960), p. 345.

Plato was willing to educate all in the state, but he reserved for students with unusual talents the more advanced levels of education. His position in respect to liberal education cannot be stated in such a clear-cut fashion. The expression liberal education, has many connotations. From Plato's time to our own, few educators have agreed as to what it is or how it is to be obtained. Plato knew what liberal education in his time was perceived to be by most people. It was an education given to a leisure class for a leisurely life they were leading and would continue to enjoy. This type of education did not meet with Plato's approval.[5]

Plato's objective was universal truth. He built his educational system on a fundamental truth, and its conquest by rational knowledge. This "royal knowledge" could be enjoyed as readily by a man who ruled a city or who had only his family and household to govern.[6] Possession of truth, distinguishing the orator from the Sophist and the true philosopher, also establishes the true from the false physician.[7] The type of training envisioned by Plato for training the political leader was of universal value. In any field of human endeavor, the only worthy ideal for a man of culture was that which led him to seek truth

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[5]Edward J. Power, Main Currents in the History of Education (New York: McGraw-Hill Book Company, 1962), p. 85.

[6]Plato, Statesman, op. cit., §259.

[7]Plato, Sophist, op. cit., §268; Statesman, op. cit., §257, 258; The Republic, op. cit., §499.

and the possession of real knowledge. The whole of Plato's thought is dominated by this fundamental and for his time, extremely liberal idea.[8]

II. PRE-NATAL INFANT TO AGE THREE

The subject of education is introduced frequently in Plato's dialogues. In his earlier shorter dialogues it appears in the teachableness of the virtues. In his two greatest works, The Republic and The Laws, education forms a major theme. In one way or another it formed the background of practically all that he thought and wrote because of the exalted value he placed upon it. He considered education ". . . the first and fairest thing that the best of men can ever have."[9]

Care of children is a matter for advice rather than law, for it takes place within the privacy of the home. To legislate to the smallest detail would only bring law itself into dispute.[10] Proper child care, according to Plato, is really an unwritten law and tradition that governs citizens' lives. The aim of education is to make body and soul beautiful and good; the early growth of all plants and animals is the most important period of learning. During this early period proper physical exercise is of greatest importance.

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[8] H. I. Marrou, A History of Education in Antiquity (New York: Sheed and Ward, 1956), p. 66.

[9] Plato, The Laws, op. cit., §644.

[10] Plato, The Republic, op. cit., §427.

Plato clings to his belief that the process of education should start as soon as possible. He even suggested pre-natal care as necessary for the production of healthy offspring.[11] During this early period proper physical exercise is of greatest importance. We should begin with the bodies of infants still unborn.[12]

> . . . that a pregnant woman must take walks, and fashion the child like wax while it is still pliable. He must be in swaddling clothes until age three. We shall compel our nurses under threat of punishment by law, always to carry the child about either to the country, the temple, or to visit relatives until it is able to stand up sufficiently well even then to be careful lest standing up while still small twist the limbs and to make trouble to carry him till he is fully three years old.[13]

He realized that the young baby is an active creature, and he appealed to the practice of nurses who calm distrubed and restless infants by rocking them or by taking them into their arms and walking about with them.[14] Movement is very beneficial. Mothers should always rock their children to sleep and sing to them. Plato believed that motions help to comfort the soul in infancy. At this time fear plays a great part in life.[15] Children must learn to overcome the terrors upon them.

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[11]Curtis and Boultwood, op. cit., p. 23.

[12]Plato, The Laws, op. cit., §789.

[13]Ibid.

[14]Curtis and Boultwood, loc. cit.

[15]Plato, The Laws, op. cit., §791.

> . . . that nursing and moving about by day and night is good for them all, and that the younger they are, the more they need it; infants should live, if that were possible, as if they were always rocking at sea. This is the lesson which we may gather from the experience of nurses, and otherwise from the use of the remedy of in the rites of the Corybantes; for when mothers want their restless children to go to sleep they do not employ rest, but, on the contrary, motion-rocking them in their arms; nor do they give them silence, but they sing to them and lap them in sweet strains; . . . .[16]

A child should not be spoiled and pampered. Neither should he be treated harshly. The former will make him into a difficult and bad-tempered man and the latter will make him too humble and reduce him to a condition fit only for a slave. Babies start to cry loudly as soon as they are born.[17]

> Do not nurses, when they want to know what an infant desires, judge by these signs?--when anything is brought to the infant and he is silent, then he is supposed to be pleased, but, when he weeps and cries out, then he is not pleased. For tears and cries are the inauspicious signs by which children show what they love and hate. Now the time which is thus spent is no less than three years, and is a very considerable portion of life to be passed ill or well.[18]

It is unwise for a baby to have his every want satisfied all this time, for it may permanently undermine his personality. The good life does not consist in grabbing at every kind of pleasure and avoiding every kind of pain. At this early age, character is formed by habit so immediately and continuously the child should be guided in habit formation.

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[16] Ibid., §790.

[17] Ibid., §791.

[18] Ibid., §791, 792.

Plato believed that education must begin with the first breath of life. He assumed that the period from birth to the age of three is more vital than any other in the forming of right attitudes. The state's responsibility must begin in the nursery, where competent teachers and nurses working with the director of education, were to guide the mother to the training of the child.[19]

III. EARLY CHILDHOOD: FOUR TO SIX

Children from age four to six require sports, play and increased discipline.

> . . . now is the time to get rid of self-will in him, punishing him, but, not so as to disgrace him. We were saying about slaves, that we ought neither to add insult to punishment so as to anger them, yet to leave them unpunished lest they become self-willed, and a like rule is applied to the free born.[20]

At this period in a child's life Plato believed that the child should be a part of a social group where he could learn to associate with others of his age. Therefore, it was provided in the community.

> . . . all children between the ages of three to six ought to meet at the temples of the villages, the several families of a village uniting on one spot. The nurses are to see that the children behave properly and orderly.

Plato's idea was to leave young children to themselves and to observe that they will discover soon a variety of activities which

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[19] V. Wayman, "Plato's Scheme for Public Education." *Education* (December, 1937), pp. 242-246.

[20] Plato, *The Laws*, *op. cit.*, §793, 794.

[21] *Ibid.*, §794.

delight them. They will often invent their own games. Play should be regarded as a means of producing healthy bodies; it also accustoms young children to cooperate with one another and it is a good antidote to the growth of selfishness. It is not wise for adults to interfere too freely with children's play. The children were to be allowed their natural inclinations in regard to play as long as they were well behaved.[22]

It was Plato's wish that the first years of childhood should be spent by boys and girls playing educational games together under supervision in a kind of kindergarten. He felt that any one who was good at anything must practice that activity from youth upward. If the child is to be a good builder, he must play at building houses. If he is to be a good husbandman, he must play at tilling the ground. The supervisors should provide these young with mimic tools. These youth should learn beforehand the knowledge which they will afterwards require for their art. The future carpenter should learn to measure or apply the line in play. A future warrior should learn riding or some other exercise. So Plato's educational philosophy consciously concerned itself with vocational preparation as a continuing end of the educational process.

The teacher should endeavor to direct the children's inclinations and pleasures in his play toward his future aim in life. Through these amusements education becomes a fun game. The most important part of education is the right training in the nursery. The soul of the child

[22]Curtis and Boultwood, op. cit., p. 24.

at this age is pliable. He should be guided in his play to love the sort of excellence that when he grows to maturity he will be more perfect.[23]

The nurses should be appointed to give supervision and to see that children play in an orderly fashion without harming one another.[24] These gatherings of children were to be under the supervision of twelve matrons who were to be selected by the Director of Education.[25]

Plato described exact levels of education. From the ages three to six the child undergoes informal education. He thought disciplinary measures should be used freely if the child misbehaved. At this age the children were introduced to fairy tales, but care was taken that only ennobling stories were told them. The children were left to their own inclinations and pleasures.[26] A more formal education was to follow at ages six to ten.

IV. MIDDLE CHILDHOOD: SIX TO TEN

It was Plato's wish, as already indicated, that the first years of childhood should be spent by girls and boys playing educational

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[23]Plato, The Laws, op. cit., §643.

[24]G. M. A. Grube, Plato's Thought (Boston: Beacon Press, 1935), p. 247.

[25]Plato, The Laws, op. cit., §794.

[26]Fredrick Mayer, A History of Educational Thought (Columbus: Charles E. Merrill Books, Inc., 1960), p. 93.

games. For Plato, as for all other Greeks, education in the more formal sense did not begin until the child was six. Then it was to consist of gymnastics for the body and music for the soul. The curriculum was expanded to include music, letters, mathematics, and religion.

The sexes at this age were segregated and the time for formal learning was begun. The boys associated only with their own group. Their teachers instructed them in the use of the bow, javelin, and sling. Horsemanship was a part of both boys' and girls' education. The girls, if they did not object, also learned how to manage the above weapons and especially how to handle heavy arms. Both sexes became skillful in handling weapons with the right hand but gained equal dexterity with the left.[27]

> In that the right hand and left hand are supposed to be by nature differently suited for our various uses of them; whereas no difference is found in the use of the feet and the lower limbs; but in the use of the feet and the lower limbs; but in the use of the hands we are, as it were, maimed by the folly of nurses and mothers; for although our several limbs are by nature balanced, we create a difference in them by habit.[28]

Plato thought that the development of the right hand at the expense of the left was to be avoided. All men are naturally ambidextrous and this quality is very useful in war. The students will learn recitation and eurythmics, dancing in full armor, and wrestling, but not in the tricky way which was then fashionable.[29]

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[27]Plato, The Laws, op. cit., §794.

[28]Ibid.

[29]Ibid., §796.

Plato believed in a balance and interdependence of mental and physical exercise. He thought that music and gymnastics were excellent if taught together. Music, alone would cultivate effeminacy and gymnastics would lead to hardness, ferocity, and savagery. If they were taught together, they produced harmony.[30] Plato taught that health of mind was dependent on that of the body. Proper moderate exercises benefited both. Bad thinking might be caused by ill health. If the body were in bad condition, loss of memory, depression, and even insanity may result.[31]

Referring to the education in music and gymnastics the Athenian declared emphatically that children's games after the age of six are of greatest importance in the formation of character.[32] For that matter change in what one is used to is generally a mistake unless one's habits are definitely bad.[33] Such changes are liable to make trouble in the soul.[34]

> As we said before, people think children's games trifling things and that changes in them can do no great harm and are of no consequence, since they are but games. Children are not prevented from changing them, they are rather encouraged. Men do not take into account that inevitably children who make

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[30] Thomas Woody, Liberal Education for Free Men (Philadelphia: University of Pennsylvania Press, 1951), pp. 22, 23.

[31] Plato, The Republic, op. cit., §405.

[32] Grube, op. cit., p. 248.

[33] Plato, The Laws, op. cit., §798.

[34] Ibid.

> innovations in their games will grow up into men different from those who were children before them; that being different, they will look for a different life and that, in their search for it, they will want different laws and habits. Thus continual change, that great evil we mentioned, will come upon the state, but none will fear it.[35]

Art represented the deeds of good and bad men. Bad art our children should not want and no one should tempt them to enjoy it. The manner of celebrating festivals should be fixed with their dances and rituals.[36]

In Plato's plan there were public gymnasia and schools open to all; three within the city, three for riding and archery, and related activities where youths can practice.[37] Although both sexes received similar instruction, the spirit in which it was given was different. Boys, destined to be soldiers, were trained with that end in view. Girls were to become mothers of families and only in later life, when they had passed the age of child bearing, were they to be called upon in an emergency to defend the state. The nature of the training of boys and girls was affected by the respective demands made upon them in later life.[38] Gymnastic teachers were foreigners paid for the purpose of instruction in the art of music performance and appreciation and the art of war. These foreign teachers were provided dwellings in which they resided.

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[35] Ibid.

[36] Ibid., §799.

[37] Ibid., §804.

[38] Curtis and Boultwood, op. cit., p. 25.

As provided in The Republic education was not limited to a small section of the community. It was universal and compulsory for children of all citizens. Education was compulsory with no parent having the right to keep his child away. Education was aimed at producing the best type of citizen both for war and peace. Pupils were regarded as belonging to the state rather than to the parents.[39]

Boys and girls had the same opportunities to learn, for women served the state as well as men. Though citizens were relieved of menial tasks and had considerable leisure, it is a mistake to think that a life devoted to virtue was an easy life. There was supervision, first by mothers and nurse, then by an attendent slave, and schoolmaster, needed at all stages. This was so for ". . . a child is the most difficult of all animals to deal with . . ." and he must be bridled. Every citizen who sees a child misbehave should correct him; indeed he is compelled to correct them.[40] It is clear that the educational emphasis during this middle childhood age of from six to ten years strongly stressed physical fitness.

V. LATER CHILDHOOD: TEN TO THIRTEEN

After all children had completed these three years of vigorous physical training, they began fundamental reading and writing. This study of reading and writing was carried on between the ages of ten and

[39]Plato, The Laws, op. cit., §804.

[40]Grube, op. cit., p. 248.

thirteen. "A fair time for a boy of ten years old to spend his time in letters is three years; the age of thirteen is the proper time for him to begin to handle the lyre . . . ."[41]

Plato realized that some children would not become proficient in their reading or writing. He believed they should be occupied with their reading and writing until they were able to read and write or for a period of three years. If at the end of three years they were still unable to read or write, it was assumed nature had not endowed them with the necessary facilities so they must be let alone.[42]

Plato had a solution for the education of this dull and backward child. Such pupils kept at their learning until unable to attain the finer points of these arts within a prescribed time. After learning all they could, they were to go to some easier study requiring less mental ability.[43]

The child must first learn to read and write, before embarking on the classics, either the full works, or as found in anthologies.[44] Only the poets and their complete works were previously studied. Plato believed that children could profit more by studying both poets and prose writers. So he introduced the idea of using "selected passages" from

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[41] Plato, The Laws, op. cit., §810.

[42] Jowett, op. cit., p. 192.

[43] Curtis and Boultwood, op. cit., p. 26.

[44] Plato, op. cit., §810, 811.

both poets and prose writers instead of emphasizing complete works of only the poets.[45]

Plato condemned the poets because their myths were lies giving false pictures of the gods and heroes. These lies were poisoning the minds of young Greeks. He stresses the importance of the quality of what a child reads and learns, of his games and music, and of his physical surroundings.

Plato broke with the long established idea that Homer was the basis of all education. This censorship of Homer put a Greek's soul in something of a delemma. The big question even in Plato's time was whether education should remain artistic and poetical or become scientific.[46]

VI. ADOLESCENCE: THIRTEEN TO TWENTY

Plato had a keen interest in music. He thought that everyone should be trained to sing and should then be able to use this skill frequently. From birth the child heard a great deal of good music. By the time he had attained his thirteenth birthday, he ordinarily could sing well. Music lessons were not to be a matter of personal ambition or leisure. Like the rest of his education, they were prescribed by law, which stated,

> . . . the age of thirteen is the time for him to handle the lyre, and he may continue at this time for another three

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[45]*Ibid.*, §811.

[46]Marrou, *op. cit.*, pp. 71, 72.

> years, neither more nor less, and whether his father or himself like or dislike the study, he is not to be allowed to spend more or less time in learning music than the law allows.[47]

The ability to sing and the ability to play the lyre held a place of honor in Plato's system of education. Music was taught by a paid music master.[48] Being loyal to the old traditions, Plato was prepared to pass strict laws to insure that the arts were taught in the traditional manner. He avoided "modern" music which supposedly encouraged degeneracy, lawlessness, and immorality.[49] Plato's whole educational effort was dominated by moral considerations.

Plato was the first to devise both a theory and a content for secondary education. Once young minds were exposed to the primary skills of reading, writing, and arithmetic in the initial and formal educational experience, Plato's plan introduced secondary education. This began at about the child's thirteenth or fourteenth year.[50]

To judge by Plato's actual words he wished to divide this latter period into three sections of three years each. First was a literature section from ten to thirteen, a second section stressed music from thirteen to sixteen; and another section emphasized mathematics. Mathematics

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[47]Werner Jaeger, Paideia: the Ideals of Greek Culture (New York: University Press, 1943), p. 244.

[48]Plato, The Laws, op. cit., §810.

[49]Ibid., §656, 700, 701.

[50]Edward J. Power, op. cit., pp. 92, 93.

was a scheme of instruction which many science teachers would be delighted with today. Plato may have meant that such was to be the dominating feature of each period. It was not the only subject taught. While gymnastics was continued from infancy to adulthood, mathematics began at age six and continued without interruption until at the end of the course it was the major occupation of the little group of pupils brilliant enough to profit from it.[51]

Women's education was not entirely theoretical, for it is known that a number of distinguished women were in the Pythagorean community. Two women attended Plato's school. He was critical of traditional education that crudely kept women from all kinds of formal learning. Plato's concern about the education of women is not the thinking of them as wives and mothers but as guards of the state. He held consistently that women were capable of making a creative contribution to building the community, but he did not expect this to be done through family life. He admitted women were physically weaker than men. Yet he did not agree that this prevented them from doing those things that traditionally belonged in the province of men. If women were to do the same work as men, they needed the same training and education.[52]

Secondary education was to have consisted of music, literature, and mathematics. Music was both instrumental and vocal. It had a social

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[51] Ibid.

[52] Plato, The Republic, op. cit., §457.

as well as a moral value. Literature, both prose and poetry, was continued in secondary education. Mathematics was also included.[53]

Great care was exercised in the choice of music for use in the city. Only the purest and the most ennobling forms were countenanced. Plato was aware of the power of music over emotions. In countless places throughout his writings he points out that bad music is as harmful as bad companions. He assumed that which was licentious called forth all the evil in man and defeated the purpose of education. The music which was played and words sung by citizens aroused passions of valor and purposeful activity. Gentle music would call forth peace and gentleness in the heart of the singer and also have a similar affect on the listener.[54]

The same principles determined choice of literature, whether in prose or verse. It was carefully censored.

> Their music and dancing as well as their reading, was carefully organized and as far as possible fixed within definite limits by the board of education, the members of which was selected by the chief magistrate whom we put in charge of the whole system.[55]

Plato condemned the poets because their myths were lies giving false pictures of the gods and heroes. He did not permit use of those stories which pictured the wars, intrigues, quarrels and the sensuality of the gods, whether they were to be allegorical or not. He observed

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[53]Marrou, op. cit., p. 76.

[54]Grube, op. cit., p. 249.

[55]Ibid.

that young people were not able to distinguish between the allegorical and the literal.

The function of mathematical studies was not simply to prove technical training. However, practical that might be, these studies had a much deeper function.[56] Mathematics awakened the mind, developing its speed, liveliness, and memorizing power. Plato approved the manner in which Egyptians taught their children through the use of number games. These games were designed to alert and familiarize children with the common number combinations. This mental stimulation Plato regarded as one of the greatest values of the study of mathematics. He said, ". . . arithmetic stirs up him who is by nature sleepy and dull and makes him quick to learn, retentive, shrewd, ...[57]

Everyone could derive benefit from arithmetic. Exercises in applied arithmetic sorted out the best pupils and encouraged them in their natural quickness to learn. The slower ones were gradually aroused from their torpor and improved by becoming quicker to learn than they would have been by nature.[58] Plato claimed that anyone could learn arithmetic because the only thing needed was the reasoning faculty, a thing that everyone possessed.[59]

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[56] Plato, The Laws, op. cit., §518.

[57] Jowett, op. cit., p. 130; Grube, op. cit., p. 249; Plato, The Laws, op. cit., §819.

[58] Plato, The Republic, op. cit., §526.

[59] Marrou, op. cit., p. 74.

Plato did not want simple calculation to lead to practical matters like buying and selling. He believed such study should have lead to a higher degree of abstraction, the idea of odd and even, the ideas of proportion, and number and numeral. "Logistics" was merely an introduction to "arithmetic" proper, that is the science of numbers, and this in turn was to lead to a sense of "intelligible reality."[60]

In the matter of curriculum, Plato followed the traditional Pythagorean guadrivium of arithmetic,[61] astronomy,[62] and acoustics.[63] Plato, anxious to include in his teaching the results of the most recent scientific discovery, added cubic geometry. This had been discovered by the great mathematician, Theaetetus.[64]

Plato assigned to mathematics a role which was above just an ordinary introductory subject. Its purpose was not to store the memory with useful knowledge but to create a "well-developed head," a mind capable of receiving and understanding truth. Plato wanted to avoid simple memorization about relationships between angles and arcs; he hoped that students could be taught to perceive and understand such relationships. So Plato did accept the fact that pupils learn best when they are helped

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[60] Ibid.

[61] Plato, The Republic, op. cit., §522, 523.

[62] Ibid., §526.

[63] Ibid., §527.

[64] Marrou, op. cit., p. 75.

to gain insights, to conceptualize, to perceive. Such action stresses thinking rather than memorizing unrelated facts, a valid modern learning principle.

The tremendous responsibility of selecting proper materials for these courses resided with the Director of Education and his assistants. Models were used in Plato's Academy and field trips were taken to study nature. Plants and animals were studied in their natural habitat.

These principles apply also to instruction in gymnastics which follows closely the period of musical education. Speaking of the educated person, Plato said, "He sings well and he dances well; now must we add that he sings what is good and dances what is good."[65]

At seventeen or eighteen years of age, the strictly intellectual studies were interrupted by two or three years of "compulsory gymnastics service." "During this time," says Plato, "it is impossible for them to do anything else: fatigue and sleep are the enemies of all study."[66] Education in the broader sense was never interrupted; military service and the actual ordeal of war provided great opportunities for the training and testing of character.

Gymnastics training was chiefly military training, archery, hurling weapons, using the light shield and heavy arms, military evolutions, encampments, and everything belonging to horsemanship. Not only did men and boys take part in military war practices, but women were allowed to

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[65]Jowett, op. cit., p. 31.

[66]Plato, The Republic, op. cit., §537.

participate. Tactics were taught by public teachers who received their pay from the state. Both sexes practiced dancing in arms and the whole art of fighting.[67]

The education of the young would leave the boy of twenty (or girl, for we know by this time that Plato's women are to share the education of the men) a hardy, active, and disciplined young creature! He was versed in the best literature and music and slightly grounded in the mathematical sciences. From twenty to thirty if he was worthy of further education, he studied the entire range of sciences in a very serious manner.

VII. EARLY ADULTHOOD: TWENTY TO THIRTY

After two or three years of compulsory military training the young men returned to their studies. They were now approximately twenty years of age. From among those who had proceeded this far up the educational ladder, the best were selected for ten additional years of study. Those selected were promoted to higher honor. The sciences which they had learned in their earlier education now were correlated. This select group was able to perceive natural relationships of the sciences to each other.[68]

Other than music these studies which Plato thought important in his educational plan at this level were: arithmetic, geometry, and astronomy.[69] Arithmetic sharpened the intellects of the bright and even

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[67]Plato, _The Laws_, _op. cit._, §813.

[68]Power, _op. cit._, p. 94.

[69]Grube, _op. cit._, p. 249.

improved the minds of the dull. Geometry needed no recommendation to the Greeks. Music and astronomy, both stressing theoretical aspects, were ideal subjects to develop the mind of the philosopher.[70]

With astronomy in the curriculum, Plato evidently expected opposition from those people who regarded as impious any attempts at searching out causes of things and the nature of the universe. Plato stated, "Our citizens must know enough not to blaspheme against gods by believing that the sun and moon are just wandering stars without fixed paths."[71]

Plato felt that every citizen should have some knowledge of these three sciences, but that a detailed study of them was only for those few who were destined for leadership. At the age of twenty these few were chosen from the most promising and given special training described at length in The Republic.[72]

This higher scientific education continued for ten years. This scientific education developed a wider viewpoint,[73] by coordinating and combining the various branches of science. The human mind was developing the faculty to detect the unity behind the relationships and the nature of the fundamental reality from which they were derived.

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[70]Power, loc. cit., p. 94.

[71]Grube, op. cit., p. 250.

[72]Plato, The Republic, op. cit., §537.

[73]Plato, The Laws, op. cit., §818.

As a rule Plato did not stress the value of content of the studies, but rather the value of "discipline." It may be that he was the theorist who started the doctrine of "formal discipline," that hard subjects will develop mental power which can be utilized in studying dissimilar work or activities or experience.[74]

VIII. LATER ADULTHOOD: THIRTY TO FIFTY

From the age of thirty to the age of thirty-five all those students (either men or women) who have excelled in all tests, both practical and theoretical, were admitted to the highest and most complete of all possible studies. These elite, intellectual people were chosen to study higher dialectic and philosophy. These men or women were to become the philosophers. This course included theory of knowledge, ethics, and psychology. Besides such subjects as harmony, metaphysics, government, law, and education were part of their study.[75]

Plato thought the study of philosophy would fulfill its best aspirations as an insight into the most important matters of life, knowledge, and religion. The late age at which philosophy is to be approached is essential to insure sufficient seriousness and steadiness in the student. Studies such as these are not for immature boys and girls just

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[74]R. Andrew Mackie, "Trends in Western Thought: Plato, Idealist," Education (December, 1953), pp. 205, 206.

[75]Charles Eby and Fredrick Arrowhead, History and Philosophy of Education (New York: Prentice Hall, 1940), p. 389.

leaving school. (It needs a character already molded in experiences of life to make them understand and appreciate truths as brought forth in the study of philosophy.[76])

From thirty-five to fifty they were again to busy themselves with the practical duties of public and citizen life. These duties have never been entirely broken off throughout their training except in the five-year interval after the age of thirty.

Plato believed that as men became older they used the dialectic method in seeking "truth." He expected these philosophers to be orderly and steadfast. This period of their lives lasted for fifteen years until they reached fifty years of age. During this period they were on active duty to minister to varied governmental and administrative tasks.[77]

IX. PHILOSOPHERS: FIFTY TO END

After the age of fifty philosophers were still to assume their share of public business, in its higher branches. They were also expected to devote themselves in large measure to deepening and completion of their philosophical or religious insights. They had to be sure in their own minds about what makes life worth living. They also were to carry out this conviction with authority and efficiency in their governmental and administrative tasks.[78]

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[76]Bernard Bosanquet, M. A., LLD., The Education of the Young in the Republic of Plato (Cambridge: At the University Press, 1917), p. 15.

[77]Plato, The Republic, op. cit., §539, 540.

[78]Bosanquet, op. cit., p. 16.

We can well understand why in describing his educational philosophy, Plato employed the expression, "a long way round."[79] Plato thought that in the sense of doing the best with the human mind, education is a lifelong process, and has two inseparable sides. You cannot "complete your studies" at twenty-three or twenty-four and then, leaving study behind, pass on to practice. The best kind of knowledge, that which makes life worth living, cannot be won except by a mind and character trained and matured in the school of life.[80]

At the age of fifty philosophers are allowed to retire from active life if they have justified themselves. They spend most of their time in contemplation of the good. At their death greatest honors will be paid to them. All that has been said of men applies to women also.[81]

X. SUMMARY

Such then was Plato's plan for the citizens of the State. The administration of the schools should be placed in the hands of a group of teachers and assistants under the supervision of one man known as the Director or Minister of Education. This officer was to be chosen from among the guardians of the law by a vote of the magistrates to whom he was directly responsible. In keeping with the dignity of the office,

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[79] Plato, The Republic, op. cit., §535, 503, 504.

[80] Bosanquet, op. cit., p. 16.

[81] Grube, op. cit., p. 241.

the election was to be held in the temple of Apollo. The term of office was to be five years.[82]

The law reads,

> One such minister will be sufficient and he must be fifty years old and have children, lawfully begotten, both boys and girls preference. He who is elected and he who is elector should consider that of all the great offices of the State, this is the greatest.[83]

His duties were numerous. He appointed teachers, studied the poetry and prose writers, and chose from them materials for use in the schools. He was the censor of literary products that approached the ears of the people and of music used in the city. Without his approval, poets might not recite their verses or musicians sing before an audience.

Thus we find the Director of Education not confining his work to the schools, but watching over all that which had to do with the molding of public opinion. In the performance of his duties he was permitted to appoint a staff of assistants. There were to be teachers-nurses who were responsible for the training of infants. Twelve matrons were to watch over the behavior of the children in the gatherings at the temples. The director of music and gymnastics, the superintendent of the great music and athletic contests which were held at intervals were under his supervision.

Plato suggested a highly organized system of education having as its head one man who was responsible to the legislators for the proper

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[82]Plato, The Laws, op. cit., §766.

[83]Ibid., §765.

training of the youth of good citizenship and for the protection of the public from unwholesome influence. The state was to supervise the training of the child always as its property and its responsibility.

Plato believed the purpose of education was the production of good citizens who would perpetuate the ideals of the State. A good citizen was a harmonious personality. Such men and women can be developed only under perfection of body and mind. The average citizen was taught those things which fitted him to live usefully and happily among his fellow men. He was industrious, temperate, and obedient to the law. Plato's plan of education was a plan for social living.

Appendix A is a synopsis of Plato's educational system as he proposed it twenty-three centuries ago.

CHAPTER III

PLATO IN THE TWENTIETH CENTURY

I. TWENTIETH CENTURY EDUCATIONAL AIMS

It is fitting that the study of education begin with the inquiry into its aims and purposes by educational philosophers. Philosophical reflection has its roots in educational concern. From Plato through Dewey runs the line of inquiry into one of man's most important ventures. The common goals, beliefs, and aspirations of a society and the aims and purposes of schools it sets up imply an underlying system of values. The philosopher must ask fundamental questions regarding these values and force a continuous re-examination of them. Such examination provides an opportunity to review the ends or goals and means or processes of education.[1]

Conflicting questions concerning philosophies of education are plaguing thinkers of our time just as they challenged ancient philosophers. What are the fundamental purposes of education? What mandates guide the school in development of curriculums, the needs of the learner, the discipline of academic subject fields, and the national interest? If these basic questions could be answered, the scope and content of educational aims would be relatively simple. Different philosophies of education press diverse expectations from the school. Some of these

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[1]Stan Dropkin, Harold Tull, and Ernest Schwarcy, <u>Contemporary American Education</u> (New York: The MacMillan Company, 1965), p. 1.

diverse philosophical views are cited via selected quotations from recognized authorities as indicated.

John Dewey, the classical exponent of the progressive point of view, a progmatist and an experimentalist, reasons:

> The school is primarily a social institution. Education is a social process, the school is simply that form of community life in which all those agencies are concentrated that which will be most effective in bringing the child to share in the inherited resources of the race and to use his own powers for social ends. Education, therefore, is a process of living and not a preparation for future living. The school must represent present life. . . . The true center of correlation on the school subjects is not science, nor literature, nor history, nor geography, but the child's own social activities. . . . There is therefore no succession of studies in the ideal school curriculum. If education is life, all life has, from the outset, a scientific aspect, an aspect of art and culture, and an aspect of communication. It can not therefore be true that the proper studies from one grade are more reading and writing, and that at a later grade, reading or literature, or science, may be introduced. The progress is not a succession of studies, but in the development of new attitudes towards, and new interests in, experience. Education must be conceived as a continuing reconstruction of experience; that the process and the goal of education are one and the same thing.[2]

The proponents of modern education claim that learning is more meaningful by relating it to life. Achievement should be assessed in terms of personal capacities. Schools today should be concerned with the total development of the learner. Self-discipline is more important than discipline imposed externally. Learning is more interesting and more learning is achieved when the student is involved. According to

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[2]John Dewey, "My Pedagogic Creed," Education Today (New York: G. C. Putman's Sons, 1940), pp. 3-17.

Clifton Fadiman, a supporter of the Great Books philosophy, basic education should emphasize:

> The primary job of the school is the efficient transmission and continual reappraisal of what we call tradition. Tradition is the mechanism by which all past men teach future men. . . . Basic education concerns itself with those matters which, once learned, enable the student to learn all the other matters, whether trivial or complex, that cannot properly be the subjects of elementary and secondary schooling. In other words, both logic and experience suggest that certain subjects have generative power and others do not have generative power. . . . It has, up to our time, been the general experience of men that certain subjects and not others possess this generative power. Among these subjects are those which deal with language, whether or not ones own; forms, figures, and numbers; the laws of nature, the past; and the shape and behavior of our common home, the earth. Apparently these master or generative subjects endow one with the ability to learn the minor or self-terminating subjects. They also endow one, of course, with the ability to learn the higher, more complex developments of the master subjects themselves.[3]

The advocates of basic education insist that the fundamental subject matter must be mastered. This is the only way that intellectual discipline can be acquired. They also claim that basic subject matter is the best education for our gifted students which should be our primary concern. They think knowledge for knowledge's sake is perfectly defensible.

Among life adjustment advocates are: Stratemeyer, Forkner, McKim and Passaw. They are professors at Teacher's College, Columbia

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[3]Clifton Fadiman in James D. Doerner (ed.), <u>The Case of Basic Education</u> (Boston: Little, Brown and Co., 1959), pp. 5, 6.

University and they state the case for life adjustment education in these terms:

> Modern living is becoming more complicated each day. Our democratic and social institutions are dependent upon a greater diffusion of knowledge and understanding. To provide an education that will function effectively in the lives of all youth the school must furnish something of meaning for the learner. It must encompass the basic values of our society. This requires that our schools furnish problems and interests of everyday living which have meaning for children as a starting point. As these immediate concerns are solved new insights are developed and delat with so as to provide bases for future action. This happens when present concerns of everyday living are seen in the light of continuing life situations, such as, keeping well, adjusting to others, understanding others, making a living, and adjusting to one's environment. We are dealing with social and political structure and forces. There are many situations that occur in life as every individual grows from infancy to maturity.[4]

The supporters of life adjustment education maintain that it helps to prepare American youth for more useful and satisfying lives as citizens and homemakers. It does not detract from the school academically as it is planned to provide for the largest group of students who do not plan on attending college. This powerful force has prevented many students from dropping out of school which today is becoming a major problem in our educational system.

Harold W. Stokes, President of Queens College expresses his belief that national survival is the goal of education:

> The new nationalism assumes that all the activities of our national life must be conducted to contribute to the

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[4]Florence B. Stratemeyer, Hamden L. Forkner, Margaret McKim, and A. Harry Passow, Developing a Curriculum for Modern Living (New York: Bureau of Publications, Teacher's College, Columbia University, 1957), Chapter 5 passim.

> strength of our nation, and education is no exception. Education is an instrument of power on which national survival depends. It is educators duty to keep the nation strong. There would be little education at least none that we think desirable, unless it is directed toward national survival. If national survival depends upon education, then education must be guided to serve national needs. This view has been stated very well when national educational leaders reiterated "that our children's minds are the nation's greatest resource."[5]

The concept of education as related to psychological development has been expressed by Professor Jersild of Teacher's College, Columbia University:

> Education should help children and adults to know themselves and to develop healthy attitudes of self-acceptance. The crucial test in the search for meaning in education is the personal implication of what we learn and teach. We must make an effort to conduct education in depth, to move towards something significant beyond the facade of facts, subject matter, logic, and reason behind which human motives and a person's real struggles and strivings are often concealed. To encourage the process of self-discovery we must raise the question of personal significance in connection with everything we seek to learn and everything that is taught from the nursery school to postgraduate years. What does it mean? What difference does it make? What is there in the lessons we teach, the experience we assign, the books we read, the experience we enter into, and in all of our undertakings, that can help us to find ourselves, and through us help others in our search?[6]

The reconstructionist point of view is illustrated by Theodore Brameld, professor of educational philosophy at Boston University.

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[5]Howard W. Stokes, "National Necessity and Educational Policy," Current Issues in Higher Education (The Association for Higher Education, Washington, D. C., National Education Association, 1959), p. 13.

[6]Arthur T. Jersild, When Teachers Face Themselves (New York: Bureau of Publications, Teacher's College, Columbia University, 1956), passim.

> While repudiating nothing of the constructive achievements of progressivism, while recognizing also the importance both of essential knowledge and clear rational analysis this philosophy commits itself, first of all, to the renascence of modern culture. It is infused with profound conviction that we are in the midst of a revolutionary period out of which should emerge nothing less than the control of the industrial system, of public services, and of cultural and natural resources by and for the common people who, throughout the ages, have struggled for a life of security, decency, and peace for themselves and their children.
>
> Education sufficiently dedicated to this purpose no longer remains, to be sure, on the fence of intellectual "impartiality," but it is an education which, for that very reason, for diffusion of knowledge, for humanly realized beauty, goodness, and truth--an education which, through the schools of America and all other democracies, could at last demonstrate its capacity to play no longer a minor but a major role in the reconstruction of civilization.[7]

What are the ultimate purposes of our education? To assure our national survival? To teach the "generative" subjects? To help the student in his everyday problems of life? To help him understand and accept himself? To reconstruct civilization? Perhaps the ultimate goal of education is to incorporate eclectically all of these into our modern educational system. In a pluralistic society such as ours there is opportunity and need for many different points of view. Difference of opinions and practices in our educational system is what makes our society dynamic.[8]

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[7]Theodore Brameld, Education for an Emerging Age (New York: Harper and Row, Publishers, Incorporated, 1961), pp. 26, 27.

[8]Chris A. DeYoung and Richard Wynn, American Education (New York: McGraw-Hill, Inc., 1964), p. 487.

One promising approach to education is the trend toward helping the student learn how to learn. The new curriculum stimulates interest and stresses mastery of the tools of inquiry relevant to the subject so that the student may continue learning on his own throughout life. By emphasizing structure and coherence of knowledge in a subject field, the student is relieved of the impossible task of digesting all the information in an academic field. He acquires a knowledgeable portion of major concepts which fit into meaningful and useful relationships and serve as a guide for continued learning.[9]

It should be noted that the population and the student are largely concerned with modern education as a preparation for life. It is meant that learning must consider future needs and consequences. Our students must study today what will be needed by the adult of tomorrow. The basic aim of education in the United States is to make it possible for all boys and girls to develop, as far as capacities permit, into well-rounded, well-informed citizens.

Just as Plato's total design for education in his time stressed preparation for and involvement in citizenship activities so do or should modern American schools. Discussion in this chapter is consciously concerned with broad comparisons between Plato's school curriculum and aims using approximately the same pupil age group, content assignments, and purposes.

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[9] *Ibid.*

II. PRE-SCHOOL: BIRTH TO THREE

An individual at any stage in his development is the product of organic and environmental factors working hand in hand. What he is, what he does, what he becomes, how he reacts or behaves in all life situations can be explained in terms of these two interacting forces,[10] often referred to respectively as innate and cultural forces.

The behavior of a human being is obviously, to a large extent, dependent upon his biological inheritance.[11] Children can perform many acts which are impossible for lower animals just because they have the organic equipment of human beings. Man's large and complex cerebrum makes possible the use of abstraction and enables him to develop symbolization and language.[12]

The child is capable of behavior long before his expectant mother notices his stirrings. Prenatal behavior has been identified from study of infants who have been delivered before the normal term. The beating of the heart is noted as early as three weeks after the time of conception. The processes involved in respiration and digestion are prepared to function several weeks in advance of normal delivery. About the third month

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[10] Glen Myers Blaire; R. Stewart Jones; and Ray H. Simpson, *Educational Psychology* (New York: The MacMillan Co., 1954 and 1962), p. 15.

[11] Frank A. Beach, "Experimental Investigations of Species--Specific Behavior," *The American Psychologist*, Vol. 15 (January, 1960), p. 1.

[12] Blair, Jones, Simpson, *loc. cit.*, p. 15.

of prenatal life many activities involving the skeletal muscles have been noted, and the range of activities increases during ensuing months.[13]

There is considerable evidence that physical traits such as eye and skin color, blood types, color blindness, and height tendencies follow the laws of heredity.[14] Several studies have been made of the effects of external stimulation upon the behavior of the human fetus.[15]

There are many factors which influence growth and development of the fetus. Proper balance of nutrients eaten by the mother. Deficiency in specific vitamins, minerals, calcium and proteins may seriously affect the developing organism and produce abnormalities which may be permanent.[16] Any diseased condition or emotional strain on the mother will affect her metabolic rate, oxygen level, and the biochemical composition of her blood. Such a condition may interfere with the course of the development of the embryo, because some new chemical substances will be transmitted to the fetus's circulatory system despite filtration of the placenta. Strong emotional reactions are usually irritating to the

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[13] Arthur I. Gates, Arthur T. Jersild, T. R. McConnell, and Robert C. Challman, _Educational Psychology_ (New York: The MacMillan Co., 1948), pp. 15, 16.

[14] A. M. Winchester, _Heredity and Your Life_ (New York: Vantage Press, 1956), p. 36.

[15] D. K. Spelt, "The Conditioning of the Human Fetus in Utero," _Journal of Experimental Psychology_, Vol. 48, 1948, pp. 338-346.

[16] J. Warkany, "Congenital Malformations Induced by Maternal Nutritional Deficiency," _Journal of Pediatrics_, 1944, 25, pp. 476-480.

fetus. Movements of the fetuses have been known to increase several hundred per cent while mothers were undergoing emotional upsets.[17]

The bacilli of infectious diseases, toxins, excessive fatigue, and very young or late biological age of the mother are among factors which influence and disturb prenatal growth in a variety of ways. The extent of disturbance depends on the severity and duration of these influences and on the embryos stage of development and with the strength which the mother and embryo are endowed.[18]

The expectant mother should live as any healthy, active, married woman. Proceeding about the home doing her daily housework as usual. Taking walks in the fresh air provides essential exercise. This provides the expectant mother with a balance of work and relaxation. A balanced diet is essential at any time, but particularly necessary during pregnancy. By carefully observing a balance of work and relaxation, a planned diet, and plenty of refreshing sleep she can expect a healthy normal baby at birth.[19]

It is quite remarkable how similar this modern thinking is to that of Plato, who lacked, of course, the benefit of scientific advances through the twentieth century. According to Plato, infant education describes mans' first contact with the world. The human soul consists

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[17] L. W. Sontag, "The significance of Fetal Environmental Differences," American Journal of Obstetrics Gynecology, 1941, 42, pp. 996-1003.

[18] Justin Pikunas and Eugene J. Albrecht, Psychology of Human Development (New York: McGraw-Hill Book Co., 1961), p. 61.

[19] Ibid., p. 76.

of the intertwined circles of Same and Other which have motions of their own. But when the gods place this in a material body, and add the mortal parts of the soul to it, a great confusion arises. The immortal intellect is suddenly linked to unreasoning feelings and passions and with these tied down into a body which has motion of its own for, being matter, it is in a state of perpetual flux. All this chaos has to be reduced to order before man can develop.[20] It is here that we find the explanation of Plato's otherwise strange insistence upon the important part which continual movement plays in the first three years of life.

Plato recommended abundant exercise and proper nourishment on the bodies of infants unborn just as our modern psychologist or doctor would recommend. The pregnant woman was to walk about and fashion the embryo within as wax is fashioned before it hardens. The mother is to swathe the infant for two years.[21] Modern day doctors recommend an expectant mother to exercise as usual expecially daily fresh air walks.

For Plato, infancy was that period from birth to age three. The child was to be well nourished and to experience as little pain and pleasure as possible. He is a creature of appetite and spirit, possessing no reason.[22] Movement at this time is very beneficial. Mothers should always rock small children to sleep. Plato felt that movement

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[20] Plato, Timaeus, §43.

[21] Plato, The Laws, §789.

[22] Ibid., §792-794.

comforts the infant soul. At this time fear plays a great part in lives of children who must learn to overcome many terrors.[23]

A child, according to Plato, should not be spoiled or pampered. Neither should he be treated harshly. The first will make him grow into a difficult and bad-tempered man. The second will make him far too humble reducing him to the condition fit only for a slave.[24]

Plato says it is bad for a baby, who starts to cry loudly at birth to have his every want satisfied all the time. In fact, it is the worst thing that could happen to him, permanently undermining his character. The good life does not consist in grabbing at every kind of pleasure and avoiding every kind of pain. At this early age character is formed by habit.[25]

As in Plato's day modern specialists in child care are concerned with the mother in the prenatal period. This concern extends to the child at birth. After the child returns from the hospital there is accelerated learning in response to the stimulation received from the social and physical attention of adults and children in the household. Much learning is occurring at this time. The child is highly dependent upon his environment for nurture. A disequilibruim in his bodily processes results in a cry which makes for a reaction of others toward him. If he is handled only when he is crying, he may also cry in order to get

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[23] Ibid., 8791.

[24] Ibid.

attention. If he is handled when he is cooing, gurgling and happy; cooing and gurgling may be a learned method for securing social attention.[26]

Psychologists and pediatricians are questioning average standards and over-regimentation. Individuality not only impresses the pediatrician, but also later impresses the educator. His respect for individuality has led to greater emphasis on what might be called maturalistic conditions, with the child's own rhythms governing the time of feeding, excretion, and sleeping. Individuality is recognized in the amount of food needed, and appetite as a guide. Psychological as well as physiological considerations have tended to reinstate some of the more natural conditions for caring for and nursing the infant. This is the same type of wisdom which is modifying the traditional standard type of education in later life.[27]

Plato believed that education must begin with the first breath of life. He stresses that the period from birth to three is perhaps more vital than any other in the forming of right attitudes.[28] Today some modern psychologists make this comment:

> A child's education begins as soon as he is born. His first curriculum consists of his contacts with adults, the ways in which he is handled and cared for, and the sights, sounds, and other sensory stimuli that impinge upon him. Many of the experiences

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[26] Willard C. Olson, Child Development (Boston: D. C. Heath & Co., 1949), p. 21.

[27] Ibid.

[28] V. Wayman, "Plato's Scheme for Public Education," Education (December, 1937), pp. 242-246.

that play a part in shaping his habits and molding his character arise incidentally, without plan, in the course of his daily care. But from the beginning, his elders have countless dealings with him that affect his everyday experiences and thus are a feature of his education.[29]

Plato pointed out the importance of adult influence on the child in his Protagorus, when he said:

> Education and admonition commence in the first year of childhood to the very end of life. Mother and nurse and father and tutor are vying with one another about the improvement of the child as soon as ever he is able to understand what is being said to him.[30]

Plato was well aware of adult influence on children during these early formative years. He thought children would be ambidexterous if they were not influenced by adults or their peers. If children were able to use both legs equally well, why couldn't they become skillful in handling weapons with their left hand as well as their right? He stated this as follows:

> The right hand and the left hand are supposed to be by nature differently suited for our various uses of them; whereas no difference is found in the feet and lower limbs, but in the use of the hands we are as maimed by the folly of nurses and mothers; for although our several limbs by nature are balanced we create a difference in them by habit.[31]

Modern psychologists claim that during the first months of life, children do not show consistent preference for the use of one hand. A

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[29]Gates, Jersild, McConnell, Challman, op. cit., p. 15.

[30]National Society for the Study of Education, 28th Yearbook, quoted from Plato's Protagorus. Selections from Jowett's Translation (Oxford: Clarendon Press, 1885), pp. 20, 21.

[31]Grube, op. cit., p. 247.

majority of youngsters eventually conform to adult ways and turn out to be right handed. The younger the child, the more ambidexterous he is likely to be. Even at later ages, individuals vary in the degree of their right or left handedness. Many persons who definitely show a preference for one hand use the other for certain performances.

It appears that both anatomical and environmental factors play a part in determining handedness and that the relative influence of these factors varies in different individuals. The fact that the proportion of apparent left handedness during early childhood is somewhat larger than at a later time, and that a majority of parents, both wittingly and unwittingly, load the environment in favor of right handedness, suggests that there might be relatively more "southpaws" in the adult population if children were left entirely free to develop in their own way.

Since the child is moving into a predominantly right-handed world, steps taken by his elders to encourage right handedness will be of some advantage to him. To interfere with a tendency toward left handedness may have unfavorable effects, especially when such interferences involves compulsion and emotional strain.[32]

Few adults can recall anything that happened before the age of three. Yet note how far a human being has gone in the school of life by that time. He has mastered the intricacies of language. He can use several hundred words; he understands many times that number. He has a vivid imagination. Images arise not only in his waking moments but also

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[32]Gates, Jersild, McConnell, Challman, op. cit., p. 70.

in his dreams. He has acquired a vast array of skills. His emotional life is highly complicated. His fears and resentments, his attitudes of friendliness or hostility, suspician or trust toward other people have been profoundly influenced by his past experience. He has acquired many tastes and preferences with respect to food and other things. He has been schooled in notions of good and evil. Already he may possess highly charged attitudes with respect to fighting, breakage of property, sex, cleanliness, and the like.[33]

By the age of three the child's life has encompassed this and much more--yet nearly all of this period is lost in oblivion. Habits, attitudes, and tendencies he has acquired influence his behavior whether or not he remembers their origin. His personality is not completely set for a person learns as long as he lives. His ways of thinking and feeling are continually being modified. In this process of learning, each new experience is received, interpreted, welcomed, or opposed in terms of what has gone before. The fact that a child is not fully aware as to what these terms are during the first years of life makes it all the more difficult to explain many of his actions. This curtain concealing his early life is one factor that sometimes results at the adult level in behavior that is personally baffling and puzzling to others.[34]

It is little wonder that throughout history from Plato's time to the present, man has maintained the first three years of life as the most

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[33] Ibid., p. 19.

[34] Ibid.

vital to all human beings. Today efforts have been made to find ways of looking behind this curtain (conception of age three) notably by psychoanalysts. The answers given by noted psychoanalysts are regarded as lacking in scientific proof. However, some important questions have been asked about these early months of life.[35] Psychoanalysts, psychologists, and psychiatrists continue searching for answers to these questions much as Plato had done twenty-three centuries ago.

III. PRE-ELEMENTARY: FOUR TO SIX

Kindergarten. Plato once said that education began with the earliest years of childhood and lasted to the very end of life. He stated that as soon as the child was to understand what was spoken, parents and nurses taught him to say what was true and to do what was right. Later instruction was in reading and writing, learning songs, playing a stringed instrument, and participating in games and sports. Knowledge can be taught in play according to Plato. Music, games, and dances he believed, would mold the manners of children and would form their character.[36]

He was more concerned with activities of children and less with accumulation of knowledge. These early childhood activities, taking place in the Greek temples were the forerunner of the modern nursery schools or kindergartens. More recently we have a new federally subsidized

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[35] Ibid., pp. 19, 20.

[36] H. G. Good, A History of American Education (New York: The MacMillan Co., 1956), p. 203.

pre-school program, Project Head Start, discussed more fully later in this chapter.

Plato described the gathering at the temples in this way:

> At three, four, five, and even six years the childish nature will require sports; now is the time to get rid of self-will in him, punishing him, but not so as to disgrace him. . . . Children at that age have certain natural modes of amusement which they find out for themselves when they meet. And all of the children who are between the ages of three and six ought to meet at the temples of the villages. . . . The nurses are to see that the children behave properly and orderly.[37]

Friedrich Froebel, creator of the kindergarten, was a lifelong observer of the ways of children. The child is characterized by his activities. Every child is an individual, different from all others, and is self-active. Every child's activities are creative. Activities devised for this age group ranged from pat-a-cake to group self-government.[38]

In 1855, Mrs. Carl Schurz established a kindergarten in her home at Watertown, Wisconsin. William T. Harris, superintendent of schools in St. Louis, encouraged Miss Susan E. Blow to open the first kindergarten in a public school system in 1873. By 1883 public school kindergartens had been organized in such numbers that a kindergarten department was set up within the National Education Association. By 1912 the federal government had recognized the magnitude of the kindergarten movement and established a Children's Bureau in the Department of Labor. One year later

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[37]Plato, The Republic (Great Books of the Western World), Vol. VII, (Chicago, 1952), §694.

[38]Good, op. cit., p. 205.

the Kindergarten Division of the United States Office of Education was organized.[39]

The modern kindergarten is a place most responsive to the needs of the child. It should have no set pattern of activities or set program of learning. Physical, mental, social, and emotional growth of the child at this age is best accomplished by a very flexible program at work and play in an environment rich in sensory experiences and opportunities for varied activities.[40]

The kindergarten is a play school, but here the play has a purpose. For the young child, play is the means of getting acquainted with his environment. He feels things, tastes them, moves them about, pushes and pulls them, and learns. The kindergarten teacher structures the environment so that the child may have materials for making his purposes concrete. Paints, clay, paper, large blocks, specialized toys, and other materials are there for his use.[41]

In this environment the child has an opportunity to participate in group rythmic experiences, to sing and dance, to hear and think about stories familiar to the child. Here we have a child's day, built around needs and interests of a four, five, or six year old. Out of such

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[39] S. E. Frost, Introduction to American Education (Garden City, New York: Doubleday and Co., 1962), p. 38.

[40] *Ibid.*, p. 45.

[41] *Ibid.*, p. 46.

experiences a child is well on the way to adequate muscular development, co-ordination, social responsiveness, and creative expression.[42]

Kindergartens represent a realistic approach to needs and interests rather than the formal, symbolic philosophy of Froebel, or, the formal sterotyped apparatus developed later by Maria Montessori.[43] New media is constantly being put to use; the kindergarten of tomorrow will probably be entirely different. These new media will be utilized for sense stimulation in the child's environment. They will not be used as a means of entertainment but as aids for learning and sensory development.[44]

Plato's gatherings at the temples were a small beginning in educational opportunities for the very young child. This beginning of educational opportunity for the young child has boomeranged until today's modern kindergarten has little resemblance to Froebel's. This makes one wonder what tomorrow's kindergarten will be like. Here is truly a frontier area of modern education.

Nursery school. The nursery school, predicted as necessary for a child's development and early training by Plato, did not appear until later in the development of American education. The kindergarten was recognized by the National Education Association in 1883. Nursery schools

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[42]*Ibid.*, p. 46.

[43]I. L. Kandel, *American Education in the Twentieth Century* (Cambridge, Massachusetts: Harvard University Press, 1957), p. 83.

[44]Frost, *op. cit.*, p. 47.

began their development at the beginning of The Depression of the nineteen thirties. Even today there are not many publicly supported nursery schools. The nursery school idea is gathering momentum as many modern mothers are working outside the home. Nursery schools ordinarily enroll children from the ages of eighteen months to three years. Kindergarten usually provides for children between four and six years of age.[45]

In many respects nursery schools follow the same principles which support the kindergarten, allowing for differences in the ages of the children. Nursery schools have a greater responsibility for the training of the young pupils in physical habits. Therfore, the size of the group taught by one teacher is generally limited to fifteen. Because children normally experience a longer day than do kindergarten pupils provision is made for meals and rest periods. Otherwise activities are similar to those in kindergarten, consisting of group play, training in healthful living and hygenic habits, and learning music, rhythm, dance, dramatization, drawing and painting, as well as working with clay and wood. Activities are conducted indoors and outdoors. The basic aim is to create a happier and healthier childhood.[46]

Psychologists claim that growth of children at nursery school and kindergarten level is greater in scope and extent than at any stage of

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[45] George R. Cressman and Harold W. Benda, Public Education in America (New York: Appleton-Century Crafts, Inc., 1965), p. 66.

[46] Kandel, op. cit., p. 86.

their development. These children are not only discovering but creating a new world for themselves.[47] Plato, also believed in the gathering of the children at the temples. He thought that music, games, and dances would mold the manners of the children and would form their character much as modern psychologists think.[48] He placed supreme importance on training in the earliest years of life.[49]

Project Head Start. This is one of the several Community Action Programs operated under the Office of Economic Opportunity.[50] In October, 1964, Congress passed the Economic Opportunity Act which was designed to minimize the impact of poverty and to attempt to reduce it. The provisions under this section encourage communities to undertake new approaches to problems associated with poverty. An interesting feature of this program is that proposals must come from the community. Starting these programs is a local community responsibility.[51]

Head Start is a concept of a child development center. It involves many resources such as family, community, and professional workers who can contribute to the child's total growth. As a community

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[47] Ibid., p. 86.

[48] Good, op. cit., p. 203.

[49] G. M. A. Grube, Plato's Thought (Boston: Beacon Press, 1935), pp. 234, 235.

[50] D. K. Osborn, "A Look at Child Development Centers—Operation Head Start," The Reading Teacher (February, 1966), p. 323.

[51] Ibid., p. 332.

facility, the child development center is organized around the classroom and the play area. It provides a program for health services, parent interviews, feeding the children, and meetings of parents and other residents in the community.[52]

This concept recognizes that some children have been deprived in many areas. Lack of intellectual stimulation is one of several gaps for children of the poor. While the concepts of the nursery school is sound, the concept of a child development center seems more appropriate for the children served by Head Start. Many Head Start children receive early diagnosis of medical problems. In some instances a "slow learning" problem may in reality be a dental problem. A discipline problem often turns out to be a medical one. Most children in Head Start programs receive one hot meal a day, often their only substantial meal.[53]

Head Start teachers often feel that much of their program's success is due to controlled class size. This is almost an ideal situation allowing small-group teaching. The teacher can better provide each child with maximum individualized instruction in such a controlled environment.

This program will ultimately affect the entire educational field. School administrators are discussing ways to extend school downward. If Head Start were incorporated into our educational system permanently in a carefully planned program, this should give pre-school children day-care

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[52]Ibid., p. 332.

[53]Ibid., p. 332, 333

centers manned by excellent teachers. Such expansion would serve as a downward extension of our publically supported common school system.[54]

Plato also reflected this philosophy as he believed that this early training at the temples was important. He felt that environment was essential to the development of a "whole" child just as modern psychologists advocate today. The earlier the child is influenced by enriched environments, the better adjusted individual he will likely become in adult life.

Some summarizing remarks. Freudian psychologists have long held that the experiences of childhood are crucial so far as later developments in personality are concerned. It is their opinion that in the first five or six years the basic life pattern is set. Although it is probable that they have somewhat overstated their case with respect to the all-pervading influence of early childhood experience upon later behavior, no one doubts the extreme importance of this period.[55] Florence Goodenough suggests that there is some evidence, ". . . that one-half of an individual's ultimate mental stature has been attained by the age of three years."[56] The preschool years and the elementary years do represent periods of most rapid physical, mental, and social growth.

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[54] Ivor Kraft, "Head Start to What?" The Education Digest (November, 1966), pp. 1, 2.

[55] Glen Myers Blair, R. Stewart Jones, Ray H. Simpson, Educational Psychology (New York: The MacMillan Co., 1962), p. 67.

[56] Florence L. Goodenough, "The Measurement of Mental Growth in Childhood," Manual of Child Psychology (New York: John Wiley and Sons, Inc., 1946), pp. 467, 468.

Habits formed during this period are difficult to break at later stages in development, and many behaviors left undeveloped during this period are difficult to establish later.

Plato seemed to be aware of character formation in these early years as he declared, "The most important part of education is right training in the nursery."[57] Plato's education at this period was to consist of play, fairy tales, Mother Goose and simple amusements. In fundamental purpose, this is essentially what one would expect to find today in a modern nursery school, kindergarten, or Project Head Start.

IV. ELEMENTARY SCHOOL: SIX TO TWELVE

PRIMARY GRADES: SIX TO EIGHT

Primary. Grades one, two, and three, usually grouped together, are called primary grades. Teachers ordinarily prepare to teach not one but all of these grades. Most primary children are six, seve, and eight years of age. Teachers of primary-grade children have the task of beginning the child's formal education. This is the time when children formally start learning to read. They learn to write and begin their first formal work with arithmetic. In these early grades children acquire habits and skills that they will employ throughout life. Teaching these foundational attitudes and tools is not only very important, but a highly technical job. Children pass through primary school but once.[58]

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[57] Plato, The Laws, §643.

[58] George Willard Frasier, An Introduction to the Study of Education (New York: Harper & Brothers, 1956), p. 34.

Elementary schools are usually "progressive" in the earliest grades. At this level growth of the child is more important than any subject matter. The teacher is a planner, a guide and a member of a group she is teaching. The really sound features of so-called progressive education have become an almost universal part of the modern elementary school.[59]

The nursery school and the kindergarten demonstrate progressive education in its best form, for the child is the center of all consideration. The school is interested in how he behaves and grows as a human being. There is constant activity. Children are made happy while they are constantly encouraged to learn, there is no fixed subject matter to be taught. The really modern school carries this flexibility and activity of the lower grades through all the grades above.

During these primary years the emphasis is upon learning to read, to write, and to figure. Children are not expected to gain any degree of mastery of these skills at this level. Normally he will develop some skill in reading simple material, writing personal letters and short reports, and solving simple problems in arithmetic. In addition to these intellectual accomplishments, the child is engaged in other activities that are designed to help him grow socially, physically, and emotionally.[60]

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[59] Ibid., pp. 367, 368.

[60] Ibid., p. 66.

INTERMEDIATE GRADES: NINE TO ELEVEN

Intermediate grades. As the child moves into the intermediate grades, his newly acquired academic skills remain the focus of attention, but here the emphasis is strongly upon enrichment and the use of these skills in the activities which are engaging his interest. Stories and text material are read. His spelling skills are expanded to include those words making up the child's rapidly widening vocabulary. More attention is paid to the finer points of clarity, exactness, and style in writing. Arithmetic becomes more important in meeting demands of the child's modern environment. Several new learning areas are opened to children at this age. Social studies, science, art, music, literature, and history are a few of the subjects with which he must deal in an increasingly mature fashion.[61]

These middle aged children have a variety of interests which are wider than those of primary children. These youngsters are interested in the expanding world about them. Social and emotional factors tend to assume greater importance during this period. Most elementary schools provide opportunities for widening experiences in these areas. These children are becoming conscious of their bodies and proud of their physical accomplishments. Because this age group abounds with energy, the school must develop a program of physical experiences that will help the child put this energy to constructive use.[62]

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[61] Ibid., p. 66.

[62] Ibid.

Plato's views. In Plato's elementary and secondary school boys and girls at the age of six were segregated, and both lived in state dormitories.[63] Plato believed boys and girls should have the same educational opportunities. Yet he did not consider a woman to be a man's equal. From the age of six to the time when students entered higher studies, girls were to follow the same educational program as boys, but they had their own schools. He advocated coeducation only at the age of six.[64] Our public schools are usually coeducational even throughout college years.

Plato's recognizing that women should be on an equal basis was revolutionary in his day. Plato did not advocate coeducation; he did advocate equal opportunity for the sexes. There is nothing to prevent the individual from rising as high in the social scale of _The Republic_ as his endowments warranted. In early Greek life, social prestige was inherited.[65] In our modern society one may, if his abilities permit, climb socially, politically and economically. He may become president of the United States. There are theoretically no mobility limits if one possesses potential necessary to succeed.

Plato would have been a strict disciplinarian if he were living

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[63] Plato, _The Laws_, §794.

[64] Power, _op. cit._, pp. 88, 89.

[65] Curtis and Boultwood, _op. cit._, p. 136.

today. He did not have a very exalted conception of boy nature, and he paid his respects to boys' unruly character in no uncertain terms.[66]

> Of all the animals the boy is the most unmanageable, inasmuch as he has the fountain of reason in him not yet regulated; he is the most insidious, sharp witted, and insubordinate of animals. Wherefore he must be bound with many bridles.[67]

Plato thought that schoolmasters, mothers, nurse and attendant slave were all needed to discipline a child at all times. It was every citizen's duty to correct a misbehaving child.[68]

Today no citizen would be allowed to discipline another individual's child. Disciplinary action if radical in nature would be referred to the police who would take action by contacting parents. Many teachers do not feel the necessity for strict discipline. In fact, some even think a permissive atmosphere conductive to the best learning. Those of "middle of the road philosophy" feel that the most successful teachers who practice a "3F" policy by being fair, firm, and friendly, encounter few disciplinary problems.

There are a great many educational issues involving elementary schools. Much controversy exists about the nature of good education. Some people believe that subjects should be difficult, discipline strict, and marking standards high. They push and prod their children at all times. These parents want their children to have good study habits and

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[66]Eby and Arrowood, <u>op. cit.</u>, p. 386.

[67]Plato, <u>The Laws</u>, <u>op. cit.</u>, §808.

[68]Grube, <u>op. cit.</u>, p. 248.

be successful in later life. They believed that simply to know is education. They worship at the single shrine of knowledge. Many of these people accept as a fact the idea that children who have little academic ability have no right to an education.[69]

Most Americans know that a common school education is mandatory through compulsory attendance laws passed in 1876. All children ordinarily through sixteen years of age, must attend school. Common belief in this country is that the school should give each child, no matter what his ability, as much education as he can use.[70]

Plato insisted upon compulsory training for all children who were to become citizens. This law applied to both boys and girls. But he was opposed to compulsion in learning, and he was aware that anything learned under coercion is painful. Plato's condemnation of compulsion in learning was only for young children. For older children he believed fully in the principle of formal discipline. Compulsory intellectual training was essential for those who were to run the state.[71] While stressing the political and social aspects of man's nature, he did not ignore its physical, religious, intellectual and aesthetic aspects. Some of these he would develop more in one class than another. Laborers should

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[69] Frasier, op. cit., p. 272.

[70] Ibid., p. 2.

[71] Eby and Arrowood, op. cit., p. 374.

be given little or no intellectual education because of their natural incapacity for it.[72]

Education proper began at the age of seven for students in Plato's day and consisted of gymnastics for the body and music for the soul. Plato did not tamper with reading and writing, the basic elementary instruction of the day. He did want to add calculation to the arithmetic curriculum.[73] Concerning arithmetic, he apparently approved of the manner in which Egyptians taught it to their children through the use of number games designed to alert children and familiarize them with common number combinations.[74] Many modern teachers agree with Plato's method of teaching arithmetic through the use of games. Most, however, do not think that computation will make all children alert, quick to learn, retentive, and shrewd.[75] This was Plato's principle reason for including arithmetic in his curriculum because people of his day made little use of mathematical knowledge. Today our students need and use their mathematical knowledge throughout life.

Since Plato's era, it has been recognized that children have different capabilities for learning.[76] He was aware that sometimes the sons of great men are lacking in ability, and also that sometimes sons of lower

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[72] James Mulhern, A History of Education (New York: The Ronald Press, 1959), p. 159.

[73] Power, *op. cit.*, p. 90.

[74] Jowett, *op. cit.*, p. 130.

[75] *Ibid.*

[76] Frasier, *op. cit.*, p. 368.

class parents might be gifted. Special ability must be recognized and provisions made for the transfer of individuals from one class of society to another.[77]

> Of a son of a golden or silver parent has a mixture of brass and iron, then nature orders a transposition of ranks and the eye of the ruler must not be pitiful toward the child because he has to descend in the scale and become a husbandman or artisan.[78]

We know today that the hereditary principle is by no means absolute. The nature and extent of these differences in modern education have been little understood until recently. In 1916 Louis Terman published his epoch-making book on the measurement of intelligence. He also published the Stanford Revision of the Simon-Benet tests. It then became possible to measure academic aptitude of children. A few years later group intelligence tests were developed. Then it was possible to measure the intelligence of all members of a class at one time.[79]

The true extent of individual differences is amazing. Typical classrooms of ordinary elementary school children will have one or two individuals of near-genius or genius status and one or two at the other extreme, classed as dull normal or of borderline intelligence. Between these two extremes lie the rest of the class. In addition to differences in thinking capacity, there are tremendous differences in physical attributes, in motor development, in social maturity, in family background,

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[77] Fredrick Eby and Charles Flinn Arrowood, History and Philosophy of Education (New York: Prentice Hall, 1940), p. 371.

[78] Plato, The Republic, 8415.

[79] Frasier, op. cit., p. 368.

in aptitudes for various creative arts, in emotional stability, and in many other areas. Plato was correct when he recognized children as being different and having different capabilities.[80]

The uniqueness of American culture is in recognizing the variety of talents and abilities of children. Each child is accepted for what he is. He is provided with maximum opportunity to develop his talents to the full extent of his capabilities.[81] This is exactly what Plato advocated twenty-three centuries ago in his ideal state.

V. SECONDARY SCHOOL: TWELVE TO EIGHTEEN

JUNIOR HIGH: TWELVE TO FOURTEEN

Junior high. Junior high school is designed for young adolescents. It serves boys and girls whose ages range roughly from twelve through fourteen. This age group does not belong in elementary school with its maternalistic approach to education, nor does it belong in senior high school with its more adult and individualistic approach to education.

The junior high school curriculum ordinarily provides a much better educational program for adolescents than that found in elementary school. It is more general in its character than the program of senior high school. Junior high is more concerned with problems of general education and with maturation problems of youth. Subject matter

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[80] Ibid., p. 368.

[81] Ibid., p. 369.

ordinarily is more closely adjusted to needs of this age group. All pupils study certain required core courses.[82] These are in such general areas as social studies, language arts, health, general science, practical arts, fine arts, music, and mathematics.[83]

Junior high school should teach many things well. It should help young adolescents discover much about themselves and help them plan for the future. In the arts students get a wide variety of experiences. General shop teaches in a single laboratory many of the arts that students may develop later on a more specialized basis. From this experience in shop he may discover a talent he will want to develop in senior high school. Literature classes introduce the pupil to a wide range of literature. Study at this level is not limited to intensified focusing on a few selections. In this way most students develop reading habits and skills. The school library should have a well-chosen selection of books.[84]

Geography, history, sociology, economics, and political science are not taught as separate subjects but are integrated into a unified course called social studies.

In a study of this kind each student should become interested in the basic industrial, social, and political problems of his country. Some time in the future he may specialize in any one of these fields.[85]

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[82] Frasier, *op. cit.*, p. 395.

[83] *Ibid.*, p. 397.

[84] *Ibid.*, p. 398.

[85] *Ibid.*

Junior high school general mathematics develops number skills necessary for every individual. A course of this kind rounds out and completes the arithmetic started in elementary school. This mathematical study also builds a foundation for specialized junior and senior high school mathematics. The boy or girl who becomes sixteen and discontinues his education has received basic mathematical knowledge which should be of lifelong value to him.[86]

In some junior high schools a student has the advantage of starting study of a foreign language which may be continued at the high school level. Very often after studying Spanish for three or more years a student learns to speak the language fluently.[87]

In the science curriculum junior high school pupils are concerned with more general introductory aspects of scientific living. These science courses give them background for more specialized study of courses in junior and senior high school.[88] Many students at this age have keen interest in science. With the help of an intelligent teacher they can become fine scientific students in more advanced grades.

Junior high school is a period of transition, experimentation, and maturation. In this age group are some who are still immature socially, physically, and emotionally. Yet others are in the process of maturing in all of these interrelated areas. At the other extreme are many who

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[86] Ibid., p. 398.

[87] Frasier, op. cit., p. 400.

[88] Ibid., p. 398.

have already attained characteristics of young adults. As a result of such heterogeneity, students in these grades need a variety of treatment, much understanding and an exceptional amount of patience.[89] Extremely empathetic and able teachers are needed. A curriculum must be flexible to meet the needs of these youngsters during these transitional years.

SENIOR HIGH: FIFTEEN TO EIGHTEEN

Senior high. Senior high school has been traditionally a four-year institution consisting of grades nine through twelve. Where the junior high has taken root, the high school is a more compact unit encompassing the tenth, eleventh, and twelfth grades. Ages of these youth attending senior high school range from fifteen through eighteen. There are really three fairly distinct types of high schools which usually are referred to as: "Academic," "Vocational," and "Comprehensive."[90]

When high schools first appeared, their programs were exclusively geared toward college entrance. Over the years, the purpose of the senior high school has been broadened to include many other goals, but its function of preparing students for college has been retained. Most modern colleges demand a thorough academic training for entrance. High schools, therefore, find growing demands for adequate preparation for college for ever large numbers and percentages of students.[91]

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[89] Frost, op. cit., pp. 66, 67.

[90] Ibid., pp. 78, 79.

[91] Ibid., p. 79.

Senior high schools also have had pressure placed upon them for new and more practical courses because of the rapid industrialization of our country. Many young people go from high school directly to jobs. Our industrial nation is demanding senior high schools to prepare them for this experience.[92]

The federal government has recognized high schools' vocational role. We have agricultural training, trade and industrial education, and typing and shorthand which were mainly inserted into the high school curriculum through government acts. Today the government is spending in excess of $37,000,000 annually for vocational education. Some metropolitan area schools offer electronics, building skills, mechanical arts and printing for boys. Beauty culture, dress design, retail selling and many other courses of interest are available for girls.[93]

The comprehensive high school encompasses students from both the college and vocational curricula in one student body. Here they share many common experiences through their general courses. Certain basic studies are required by all students. Facilities, such as health services and library, are used by all. Such a program necessitates a large student body so that specialized classes are large enough to warrant purchase of special equipment. To solve this problem many small communities have a consolidated high school. Several communities join together and

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[92] Ibid., p. 79.

[93] Ibid., pp. 79, 80.

build a high school large enough to accommodate both academic and vocational instruction.[94]

Most modern high schools attempt to present programs that will meet needs of all types of students who live in the district and attend that school. Dr. Franklin J. Keller, after studying both vocational and academic high schools, succinctly summarized his research findings:

> The facts point to an inevitable conclusion: one + one = one. It means if you add one academic preparation to one vocational preparation you have EDUCATION in large letters--bigger, better, functioning, interesting and pleasant to take.[95]

High-school administrators and teachers must be aware of the military demands made upon our youth. Every boy who has the necessary health, intelligence, and education will be drafted into the armed forces. Some boys will go when they drop out of high school. Others will go directly from high-school graduation into some branch of the service. Some will be allowed to attend college and then fulfill their military requirements. Because of this required military service, our schools should present and teach subjects and skills that could be developed that would further the plans of the military.

Evaluation of the subjects offered in senior high school might conclude that literature should lead to better adult reading habits. Social studies should lead to an interest in government and good citizenship. Art and music should develop a taste for the best in these fields.

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[94] *Ibid.*, pp. 80, 81.

[95] Frasier, *op. cit.*, p. 407.

Physical education and health courses should develop good habits of living and a healthful recreation pattern. The recreational sports such as volleyball, softball, badminton, golf and tennis are of more ultimate value to a boy or girl than are football and basketball. The girl or boy in later life will participate in recreational sports, but only professionals will be active in basketball or football.[96]

SIMILARITIES AND DIFFERENCES

Physical education. Approximately three-fourths of the states in the United States have some type of direct state legislation requiring inclusion of physical education in the school curriculum. In the remaining states, physical education experiences are provided in most schools either on a required or elective basis. This widespread inclusion of physical education is a comparatively new departure in American education. Early in the nineteenth century there were attempts by schools and colleges to establish courses in physical education, but there was no real progress until after the Civil War.

The first organized programs in physical education were in American colleges between 1850 and 1860. First public-school programs appeared much later. Since these early beginnings, the development of schools and college programs have progressed steadily, keeping pace with advancements in philosophy of education. After World War I we saw a tremendous spurt in physical education programs because many of our young

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[96]Frasier, op. cit., pp. 408, 409.

men inducted into the army did not pass their physical examinations and were not fit for military service.[97]

After World War II citizens of the United States became alarmed by the number of young men rejected for physical defects and this gave added incentive for our schools to include physical education as a required subject.[98] Today most modern-day schools include physical education in the total school curriculum. Many schools have regularly organized and scheduled classes in physical education taught by special teachers or a regular classroom teacher. Pupils are given a program of instruction in various skills. In many schools the free periods are also planned recreational activities such as games, dances, developmental exercises and rhythmetic activities.[99]

The aim of physical education may be defined as follows:

> Organized physical education should aim to make the maximum contribution to the optimum development of the individuals potentialities in all phases of life, by placing him in an environment as favorable as possible to the promotion of such muscular and related responses or activities as will best contribute to this purpose.[100]

When an individual participates in play, his body, mind and emotions are working together. He is functioning as an integrated personality and it is this functioning which is the foundation of mental

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[97] Eugene W. Nixon and Fredrick W. Cozens, An Introduction to Physical Education (Philadelphia: W. B. Saunders, Co., 1959), pp. 114, 115.

[98] *Ibid.*, p. 115.

[99] Frasier, *op. cit.*, p. 179.

[100] Nixon and Cozens, *op. cit.*, p. 56.

health.[101] This synoptic generalized account of the development of physical education instruction is here simply to relate this aspect of American education to a similar emphasis of Plato's, but with a different purpose.

Plato's interest in physical training is solely for its effects on character and for this he regards it as essential. He does not say a word about its value for health and physical development. These problems were not urgent in the small Greek city open to the country on every side as they are in the huge industrial cities of today. Health and bodily fitness were assumed as endowed by nature in Plato's day. In one profound passage he insists on importance of a balance being kept between the development of the mind and body. This must be if character is to be formed. The mere athlete will be only a fine animal and is likely to end "by being wholly uncultivated and a hater of reason." He would have no use for reasonable persuasion. He would gain all his ends by violence, like a brute beast, and he would live in a dull stupor of ignorance with no touch of inward harmony or grace. If his temperment is what Plato calls "naturally spiritless," he will likely become soft. If he is naturally "high spirited," he is likely to be weak and unstable. Readily flying into a rage and dying down again on the slightest provocation. So Plato, stresses the importance of physical training for its effects on character through all stages of education.[102]

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[101] Frasier, op. cit., p. 279.

[102] Sir R. W. Livingstone, "Plato and the Training of Character," The Educational Forum (November, 1958), p. 9.

All physical exercises Plato included under the catagories of wrestling and dancing. With the broad use of "wrestling" it may be thought to mean a school for physical education in general. Plato had no intention of developing the body to the utmost degree possible, and there was no danger of athleticism in his ideal state.[103] Plato believed that mind and body were separate but that the one should not be developed at the expense of the other. He thought a wholesome bodily development would make a real contribution to the development of the mind.[104]

In Plato's era a boy might wrestle in order to achieve all the values the sport offered, and he would be commended for it. But if he wrestled to defeat an opponent, his action would not be meritorious. Plato did not speak out violently against competitive sports, but he did not approve of them.[105]

Today in our physical education program we have recreational sports, but the stress is placed on spectator sports or competitive sports. As time goes by more of our citizens are demanding sports which they can enjoy as spectators even to the development of beginning baseball, basketball, and football at fifth grade level so schools will have the best team. Plato, along with the more thoughtful American educators, would disapprove of this type of training. He felt that sports should

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[103] Delbert Aberteuffer, Physical Education (New York: Harper & Brothers Publishers, 1956), p. 10.

[104] *Ibid.*, p. 9.

[105] Power, *op. cit.*, p. 91.

be participated in for the enjoyment of the sport, not for the competitiveness of it.

Military service. Just as our students today must interrupt their intellectual studies to participate in military service required by the government so did students in Plato's era. At the ages of seventeen or eighteen Plato's students had their education interrupted for two or three years of compulsory military service. In the United States students ordinarily must serve several years in some branch of the military. In Plato's time this was a great test of a boys' or girls' physical capabilities as noted in Chapter II, page 25. In our day boys' physical abilities and mental alertness are tested by actual participation in sham battles, studies, and physical fitness programs. We are actually reverting to ideas created twenty-three centuries and more ago to keep our military strength at a capacity level for the protection of our country.

School board. Plato declared that the Minister of Education is far the most important office of the state and that he would be the busiest of officials. Plato suggested he should associate with himself suitable citizens of either sex, essentially of a kind of Board of Education established twenty-three centuries ago. American school boards did not come into being until 1900.[106] Today's school boards have a president, a vice president and members who legislate and make the laws and policies of the school district. See Chapter II, Summary, page 31.

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[106] Sir Richard Livingstone, Plato and Modern Education (New York: The MacMillan Co., 1944), p. 6.

<u>Censorship</u>. Plato put rigid censorship on literature and music in his ideal state. Ancient poetry must be thoroughly purged of all evils and falsehoods. Homer was to be excluded for his lies about the gods. Songs must be set models. Censorship of painting, sculpture and architecture is to be established.[107] The Catholic Church exercises censorship of books and motion pictures which do not meet the approval of the Catholic Diocese.[108] The New York Public Schools have their textbooks censored by the Board of Education because they feel all books are not quality books and fit to be read by children.[109] Plato evidently believed that certain music and literature were not good for young minds, much the same as some of today recognize the same about our movies and literature.

<u>Plato was a progressive</u>. The following three quotations from Holmes reflect how far ahead of his time was Plato. The reader can easily understand that Plato was really referring to some basic principles of learning currently considered fundamentals.

> Hence my excellent friend, you must train children to do their studies in a playful manner, and without any air of restraint, with the further objective of discerning more readily the natural bent of their respect characters.
>
> To the constrained performance of bodily labor does, it is true, exert no evil influence upon the mind; but in the

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[107] Eby and Arrowood, <u>op</u>. <u>cit</u>., pp. 277, 378.

[108] Henry Ehlers, Gordon C. Lee, "Censorship and the Prohibition of Books," <u>Crucial Issues in Education</u> (New York: Holt, Rinehart, Winston, Inc., 1959), pp. 29, 31.

[109] Ehlers and Lee, "Comment on New York Textbook Censorship," p. 45.

> case of the mind, no study, pursued under compulsion, remains in memory.
>
> . . . care being taken in such a shape as not to make it compulsory upon them to learn.[110]

Plato's school was the first progressive school. It was largely informal; it counted on students to plan their own programs and to take full responsibility for their future. Pupils were to call upon the teachers for assistance only when they exhausted their own resources. Teachers were not to tell pupils what to think, but were to lead them to understanding and ultimately to truth.[111]

Modern elementary teachers advocate maturation and development more than of subject matter per se. The teacher is a planner, a guide, and a member of the group she is teaching. In this respect progressive education is firmly entrenched in the modern elementary schools.[112]

Cited in this section have been some of the similarities and differences of Plato's education from birth through secondary school as compared with modern education of the same level. It seems obvious that some educational principles and practices to a degree were a part of Plato's thinking and incorporated in the schools of ancient Greece.

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[110]Holmes, _op. cit._, p. 135.

[111]Edward J. Power, "Plato's Academy: A Halting Step Toward Higher Education," _Historical Educational Quarterly_ (September, 1964), p. 163.

[112]Frasier, _op. cit._, p. 368.

COLLEGE OR UNIVERSITY: NINETEEN TO TWENTY-FIVE

Undergraduate: nineteen to twenty-two. The first institutions of higher learning founded in this country were four-year colleges. Most of these were established for the preparation of ministers for the various religious denominations. As time went by, some of them developed into universities and others became liberal art colleges.[113]

There are now a great many four-year liberal arts colleges in America. Although most of them were formerly controlled by religious groups, trends have been away from church control. Hence today the majority of those that were once controlled by Protestant denominations are now under self-perpetuating boards of trustees.[114]

An important purpose of liberal arts colleges is to complete the formal education of some of its students and to prepare others for later preprofessional work in a university.

The term "university" is used in this country in many different ways. Usually it connotes a group of colleges that function under a single charter or that were established by a single act of a legislature.[115]

American universities are sometimes large institutions, covering a great many acres. They usually include a four-year liberal arts college. Four years of liberal arts work leading to a baccalaureate degree is

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[113] Frasier, op. cit., p. 430.

[114] Ibid.

[115] Ibid.

obviously offered. In large universities there is also a graduate school, with curriculums leading to masters and doctor's degrees. These degrees are usually bestowed in the same major fields as bachelor's degrees.[116]

<u>Graduate</u>: <u>twenty-three to twenty-four</u>. The first graduate school was opened in John Hopkins in 1876. Yale granted the first doctorate of philosophy. Today graduate schools are an inseparable part of our education pattern. Modern teachers must plan to study at the graduate level. Several states now require one year of graduate work for secondary certification. Continued graduate study leading to a doctor's degree is necessary for holding many administrative positions or for teaching in a college or university.[117]

Higher education of some type is found in every civilization. Because we live in a democracy, higher education should be keyed to the democratic ideal that guides our life pattern.[118] Plato was quite definite about his aim for higher education. He believed education meant a great deal more than imparting information. It was the redirection of the whole personality. Plato thought education should develop the best type of citizen for war and peace.[119]

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[116] *Ibid.*, p. 430.

[117] *Ibid.*, p. 431.

[118] *Ibid.*

[119] Curtis and Boultwood, *op. cit.*, pp. 8, 25.

Actually the work of Plato had its immediate influences not on the education which is discussed in The Republic and The Laws, but on students at college level.[120] By founding the Academy, Plato in effect originated the university.[121]

An inspection of the series of curriculums found in Appendix B will reveal to the thoughtful readers how much Plato has influenced all succeeding college education. The Academy in which Plato taught was an actual institution or university.[122]

This school, founded by Plato is now called the Academy. Milton later used the term to describe a form of classical secondary school which he advocated for every community. Its classical tone appealed to the early founders of American schools so the secondary schools have often been called academies.[123]

It was Plato's bequest which first instituted an educational endowment, by leaving certain pieces of land, at the place where he was accustomed to teach, to a successor whom he named. His example of leaving land endowments were followed by others, and a set of endowed day-colleges thus grew up in Athens.

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[120] A. Gordon Melvin, A History of Education (New York: The John Day Co., 1946), pp. 71, 72.

[121] Curtis and Boultwood, op. cit., p. 28.

[122] Melvin, op. cit., pp. 92, 93.

[123] Bernard Bosanquet, The Education of the Young in the Republic of Plato (Cambridge: At the University Press, 1917), p. 19.

The first support of public education by the federal government was in the form of a land grant, made in connection with the organization of the Northwest Territory of 1785. Congress decreed that the sixteenth section of each township should be set aside in that territory for "the maintenance of public schools."[124]

The Morrill Act of 1862 set aside certain lands to be used by states in establishing agricultural and mechanical arts colleges. These colleges were to teach farmers how to produce more food, engineers to devise machinery for war and teach officiers how to command.[125] Plato lead the way for land endowment for higher education.

VOCATIONAL EDUCATION

From the earliest periods of civilized life to the closing years of the eighteenth century, there was little change in vocational education. Throughout thousands of years skills have been learned by imitation or "learning by doing." Apprenticeship at first was merely a father-to-son transmittal of skill and knowledge. Later this was enlarged through adoption of sons by artisans. This practice prepared the way for indentured apprenticeship. With the advent of the factory the usefulness of apprenticeship was almost destroyed. Through all ages there has been one way for the unskilled worker to learn to do his tasks, namely, the

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[124] Frasier, op. cit., p. 220.

[125] Ibid., p. 222.

pickup method. It is only in recent years attention has been given to training the common or unskilled laborer for his work.[126]

In earliest period of American history, some form of apprenticeship constituted the chief means of training for all but common laborers. Early American colleges were established primarily to train ministers, but later expanded into professional schools. Typical of this type of institution is Harvard University which was established in 1638 and added these colleges by date as indicated: a medical school in 1782; a law school in 1817; a divinity school in 1819; a dental school in 1867; a graduate school of business administration in 1908; and a graduate school of education in 1920.[127]

Young men acquired knowledge of the profession they wished to enter by studying under a qualified doctor, lawyer, or minister. During this period the need for professional schools was realized and many instituitions grew up and were taught by private men engaged in the professions. The above three professions were early sustained by a special type of apprenticeship.[128]

Gradually training for vocations other than the "learned professions" found a place in college curriculums. Modern universities offer many opportunities for vocational education. There is also a tendancy to increase these opportunities. Following growth of vocational education

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[126]Arthur B. Mays, Principles and Practices of Vocational Education (New York: McGraw-Hill Book Co., Inc., 1948), pp. 16, 17.

[127]Ibid., p. 21.

[128]Ibid., p. 22.

in colleges and universities, secondary schools began making provision for vocational training needs of youth. In 1917 Congress passed the Federal Vocational-education Act, providing aid for certain aspects of vocational education. At the present time certain types of agricultural education, commercial education, and industrial education are firmly entrenched as divisions of education in the United States. Recently there has been a marked tendency, regarded as a public responsibility, to increase vocational education at both secondary and college levels.[129]

Plato would approve our vocational education curricula because he was a practical man.[130] He viewed vocational studies in their relation to character. He recognized their necessity for his youth would learn geometry for war and astronomy for agriculture and navigation.[131]

He advocated vocational education when he stated:

> According to my view, anyone who would be good at anything must practice that thing from youth upwards, he who is to be a good builder should play at building children's houses; he who is to be a good husbandman at tilling the ground; and those who have the care of their education should provide them when young with mimic tools. The future carpenter should learn to measure and apply the line in play; and the future warrior should learn riding, or some other exercise for amusement, and the teacher should endeavor to direct the children's inclination and pleasures by the help of amusement, to their final aim in life.[132]

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[129] _Ibid._, pp. 39, 40.

[130] Roger W. Holmes, "Great Contributors to Education," _Progressive Education_ (April, 1930), p. 135.

[131] Eby and Arrowood, _op. cit._, p. 390.

[132] Curtis and Boultwood, _op. cit._, p. 27.

ADULT EDUCATION

The scope and sequence of activities in which adults participate as part of their lifelong learning process are so numerous that no one book could possibly encompass all of these activities. The process goes on through the media of radio, motion pictures, press, and classroom; for farmers, parents, businessmen, workers and housewives; in schools, libraries, museums, settlement houses, and public auditoriums. These programs range from social dancing to Sanskrit with services ranging from child-care training to old-age counseling. Although the American effort is unequaled in any part of the world, there remains much to be done by improving facilities and procedures for adult training.[133]

Adult education should be available for everyone. We cannot have an educated nation or a true democracy until all are educated.[134] Acquiring a university degree does not assure spiritual and intellectual maturity urgently required in a rapid changing society.

Perhaps if the world stood still education would change little. But think of the twentieth century world. Before a man is forty, the world of his twenties will have changed, new problems, ideas, forces, methods, reveal themselves, and with all of these there must be a reckoning.[135]

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[133] Paul H. Sheats, Clearence D. Jayne, and Ralph B. Spence, Adult Education (New York: The Dryden Press, 1953), p. 2.

[134] Sir Richard Livingstone, On Education (New York: The MacMillan Co., 1944), p. 87.

[135] Ibid., pp. 89, 90.

It seems safe to say that necessary judgements cannot be made without a systematic informal adult education program. Perhaps periods of time are needed when we resume our education methodically and have leisure to rethink our position, and possibly revive our ideals.[136]

Educators are currently beginning to realize needs for advanced education after graduates leave schools or universities. The middle-aged group occupy key positions and directing positions of the nation. In some way this age group must be kept up to date, re-tooled in ideas and thoughts. Some means of preserving man's intellectual and physical vitality must be incorporated into his daily life. Everyone engaged in practical work needs periods of systematic study in order to refresh, re-equip, and reorientate his mind. Few individuals would not profit from it.[137]

A present trend in education is a renewed education periodically or a continuous education. Plato believed that an individual should continue his education until the age of fifty and then retire. Perhaps we will revert to this period in history incorporating an educational system similar to Plato's into our education system. See Chapter II, page 30 for related comment.

Whereas Plato's adults retired at age fifty American adults today through the enactment of compulsory retirement laws do not retire until age sixty-five. At age sixty-five our citizens usually are provided with

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[136] Ibid., p. 90.

[137] Ibid., p. 93.

Social Security pensions from the federal government. Many also receive pensions from their places of employment. Life after sixty-five varies for retired people. Some write books, continue their chosen occupations if they are professionals, while most merely spend their time in leisurely activities. For a review of Plato's citizens at age fifty see Chapter II, page 30.

CHAPTER IV

CONCLUSION

Plato, an aristocrat, who lived twenty-three centuries ago must have been gazing into a crystal ball when he so ingeniously conceived his educational system for his ideal state. It is clear that ideas conceived by him in the fifth century B. C. are still practical and in use in modified form in the twentieth century.

Plato's influence upon Western thought has been very great. It has been exerted in two main directions: (1) he stressed analysis and objective thought as he originated and developed the institution now called the Academy, and (2) he simultaneously held concern for the less objective as he philosophized about faith, visions, and mysticism to the extent of having influenced the early growth of Christianity.

An acceptable interpretation of Plato's theory of education is that his ideas, underwent an evolution throughout his lifetime of investigation and reflection. In *The Republic* he presented an ideal state and an idealistic and intellectual view of education. In *The Laws*, written in old age, he dropped his idealism and reverted to extreme conservatism.

The history of education is the story of how different educators have woven different patterns, proposed different solutions to the puzzle, and challenge and necessity that is education. One educator will offer his solution and many will hail it as the answer to the problem of education. It will not be long before another educator will discover errors in his theory of education, will reveal gaps and distortions, and will propose a somewhat different solution. In turn, this will be followed by other critics who repeat the process.

In the previous pages of this paper we have seen how one great educator, Plato, has put together a system of education that has substantially withstood the erosion of time. In a real sense our educational system stands on the thinking of all great educators of the past. Yet, it is clear that modern education is greatly indebted to Plato. Looking at our educational system today we can see many of Plato's ideas incorporated into our school system. In the schools of the future perhaps more of his thoughts and ideas will be selectively usable. How often he has anticipated reforms wholly alien to the society of his own time, some which were not accepted until now. Most of his suggestions are practical, illustrating an uncanny power of divining what was yet unborn, which no other writer ancient or modern possesses so highly. This insightful quality makes Plato in thought and action more modern than many present day persons.

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APPENDIX

APPENDIX A

PLATO'S EDUCATIONAL SYSTEM

Appendix A is a synopsis of Plato's educational system as he proposed it twenty-three centuries ago.[1] It is interesting to note how similar this chart is to twentieth century requirements in public education in the United States. See Appendix C for educational chart in the United States.

AGE	SCHOOL	SPECIAL DEVELOPMENT OR STUDIES
Birth to 3	Infancy	Bodily growth, sensory life, no fear; child reacts to pleasure or pain.
4 - 6	Nursery	Play, fairy tales, nursery rhymes, myths, get rid of self-will.
6 - 13	Elementary School	Play, poetry, reading, writing, singing, dancing, religion, manners, numbers, geometry.
13 - 16	Instrumental Music	Play the cithera, religious hymns, memorize poetry, arithmetic (especially theory).
16 - 20	Gymnastics and Military	Formal gymnastics and military training. No intellectual training.
20 - 30	Sciences	Coordination of reason and habits; interralating the physical sciences.
30 - 35	Dialectic	Philosophy, psychology, sociology, government, law, education.
35 - 50	Service to State	
50 to End	Philosophers	Higher philosophy

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[1] Eby and Arrowood, The History and Philosophy of Education (New York: Prentice Hall, Inc., 1940), pp. 389, 390.

APPENDIX B

PLATO'S INFLUENCE ON SCHOOLS AND COLLEGES

A. Old Greek Curriculum
   1. The Culture of the Muses: gymnastics and music

B. Pythagorean Curriculum
   1. Letters
   2. Arithmetic (number study)
   3. Geometry
   4. Astronomy
   5. Music

C. Aristotle's Curriculum
   1. (a) Letters, (b) music, (c) drawing
   2. (a) Grammar, (b) rhetoric, (c) dialectic, (d) astronomy, (e)geometry
   3. (a) Philosophy (a higher study)
      (1) Metaphysics, (2) physics, (3) ethics, (4) poetics

D. Roman Curriculum
   Cato the censor, in the first half of the second century B. C., wrote a series of manuals for his son.
   1. Ethics
   2. Rhetoric
   3. Medicine
   4. Military Science
   5. Farming
   6. Law

   Little of the old Greek curriculum is here, but half a century later Varro wrote on more of the subjects of the Greek curriculum.
   1. Grammar
   2. Rhetoric
   3. Dialectic
   4. Arithmetic
   5. Geometry
   6. Astronomy
   7. Music
   8. Philosophy
   9. Others

E. Finally there crystallized out from many variations the settled curriculum of the Middle Ages, the Seven Liberal Arts. The first made their appearance in the work of Martianus Capella (a non-Christian of the fifth century A. D.); they are:
   1. Grammar
   2. Rhetoric   Trivium
   3. Dialectic

4. Geometry
5. Arithmetic — Quadrivium
6. Astronomy
7. Music

It is thus clear that Plato directly influenced not merely the curriculum we use today in colleges, but also, the method of intellectual studies with their lectures and philosophic discussion. There is not one of us who is not touched by Plato.[2]

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[2]As cited here, this information was taken from Melvin, Gordon A. _A History of Education_ (New York: The John Day Co., 1946), pp. 72, 73.

APPENDIX C

UNITED STATES EDUCATIONAL LADDER

In somewhat similar parallel, the American educational ladder begins for the child at birth as did Plato's educational system for his ideal state. Plato believed that man continued his education throughout his life. Only he who had attained the age of fifty was allowed to retire and contemplate. Today adult education has developed so rapidly during the past quarter century that many who leave formal schooling for work or marriage are returning to their studies. They feel a need or desire to continue their education in certain areas, or acquire new knowledge and skills. Throughout our country today, schools both public and private, are answering in some way demands for an adult-education program such as job corps, vocational schools, correspondence schools, wide reading, lectures, concerts and many others.

In Appendix C is cited the educational ladder ordinarily found in the United States where education is available for all citizens. Note the similarities between Plato's educational system as outlined in Appendix A and the United States Educational Ladder as found on the following page.

UNITED STATES EDUCATIONAL LADDER[3]

Higher Education	Post-graduate Seventh year Sixth year Fifth year	Graduate Education Leading to: Ph. D. Degree, M. A. Degree, Professional Degrees or certificates	
	Fourth year (senior) Third year (junior)	Senior College	Standard Four-year College
	Second year (sophomore) First year (freshman)	Junior College	
Secondary Education	Twelfth grade Eleventh grade Tenth grade	Senior High School	Compulsory Schooling (age 6-16)
	Ninth grade Eighth grade Seventh grade	Junior High School	
Elementary Education	Sixth grade Fifth grade Fourth grade	Intermediate	
	Third grade Second grade First grade	Primary	
Pre-elementary Education	Kindergarten Nursery School Project Head Start	Pre-primary	

[3]S. E. Frost, Introduction to American Education (Garden City, New York: Doubleday and Co., 1962), p. 33.