A COMPARISON OF THE THEORIES OF THE EDUCATIVE PROCESS

OF

PLATO, ARISTOTLE, DEWEY AND WHITEHEAD

A Thesis

Submitted to the Faculty of Graduate Studies

and Research of McGill University in part

fulfilment of the requirements

for the degree of

Master of Arts.

by

Joan M. Macfarlane

McGill University

September 1948.

CONTENTS

PREFACE

The problem which is the subject of this study originated in part from a teaching device employed by one of the professors of the Education Department. It was his custom as he spoke of national systems of education, etc. in each case to represent diagramatically on the blackboard, the learner, his relation as a scholar to the life outside the school walls, and the avenues or sources of his learning. By virtually a process of induction, these components came to be seen to occupy the stage in every discussion of educational theory. Not only did they appear, but they offered convenient intellectual pegs on which to hang our thinking. Analyzed on this basis, similarities became apparent, while contrasts were sharpened in perspective. The question naturally arose, "What has been the relationship and relative influence of each of these factors in deliberate education since its genesis. The answer to this question would have been a history of two thousand years in theories of educating. Preliminary surveys and studies were in fact carried out. They served rapidly to reveal however, that the scope of the field was too vast for the limits of such a research, and the capacities and resources of the writer.

At this juncture, when selection became imperative, it seemed feasible instead to review the opinions of two ancient writers who were practically contemporary to one another, with those of two modern philosophers of education, who also write in substantially the same frame of reference as each other. The choice of authors needs little justification, we believe. The Greek concept of the highest life for man has weathered the vicissitudes of a plethora of social and political contingencies and continues to exert a profound effect on educational theory and practice. On the other hand, Dewey and Whitehead have played a dominant part in the scrutiny and adaptations of needs and aims in education in the twentieth century.

That the child must develop from his initial immaturity of reason and paucity of information, is a truism in any society and in any age. But society has become increasingly complex, its demands on its member so important and so continuous, that a great deal must be presented to the learner if he is to achieve full participation eventually. Nature includes not only the intricate material environment but a host of social conditions as well. The child and what is to be learned by him are two centers in the educative process, each exerting an influence on the other, and neither in itself static.

Furthermore, the Encyclopaedia Britannica states that underlying the divers and diversified definitions of education "is the conception that it denotes an attempt on the part of the adult members of a human society to shape the development of the coming generation in accordance with its own ideals of life".

It must be admitted that we ourselves are a product of this process. It is inconceivable that we can approach a comparison from the point of view of an Athenian of three centuries before Christ, or that he could evaluate current theories except in the light of the values which he held and knew. Undoubtedly we should not take the position that the theory of his time served its chief purpose as a precursor through a process of evolution to present day judgments. However, no opinion was ever rendered completely without bias or from some point of vantage supplied by criteria previously accepted as valid.

Our North American history of sturdy pioneering spirit, enterprise and resourcefulness has exalted 'Horatio Alger' success, has constitutionally guaranteed the equality of men before the law, and pronounced the right of all to freedom of opportunity. This is the tradition by which we have received free education with our fellows within the capacity of the community

to provide it. This is the tradition which must necessarily bias our appraisal of theories of education.

INTRODUCTION

It is presumptuous for any writer who is not qualified by proficiency in philosophical analysis and fully acquainted with the various schools of thought in psychology to lay claim to adequate representation of the views of writers who have influenced world thought so greatly as have these we are about to study. Certainly no such claims can possibly be made for this present investigation. At most it aims to bring out a few of the relevant statements of the authors, and draw from these postulates certain comparisons and corollaries which would appear to be valid. It must be emphasized that we are concerned primarily with educational implications rather than with the epistemology of each of the writers. The latter is metaphysical although it may presuppose a view of psychology. It is when and if the writers relate this material to the educative process that we will undertake to examine it.

The method of approach which was used was to survey all available works of each of the authors, extract actual quotations having a bearing upon the theme, having scrupulous regard for their context, and by a study of their content to decide upon divisions which would permit this virtual compendium-like material to be arranged intelligibly and in suitable context.

The justification of the applicability of the three-fold division which we shall make must be based on the nature of the body of writings to be analyzed. The initial queries undoubtedly are of this type: Did Plato deal with the learning process going on in the child? Did the classical writers see any relation between what was to be learned and the social group in which learning was occurring? Did Aristotle tell us what must be learned? To the extent that the answers to these questions could be answered in the affirmative both in their original

form and with the names of each of the other writers substituted, we should have the evidence we need. It goes without saying that each does not give equally intensive treatment to the three phases - The learner in the educative process, The curriculum in the educative process, and the social influences in the educative process. In addition, some of the material is to be gained by inference rather than from explicit reference. In this we are indebted also to previous studies and commentaries on translations, all of which are cited in the footnotes and bibliography. None of these previous studies have included all four of the authors, however.

The term ' comparison ' which by definition is the indication of similarities or relation will be expanded here to include negative relation, that is contrast.

The utility of the three main divisions has been established for the author personally on pragmatic grounds. There are, however, certain other considerations which support the contention that it supplies not only a useful but the most fruitful of possible approaches to the subject:- In the first place, it has been the custom of educational theorists and practioners of all ages to pronounce on what the process of education should ideally consist of, together with ' apologiae ' to secure their position. These latter have almost invariably stemmed from the writer's explanation of the actual mechanism involved in learning. The view that the mind comprised many faculties which could be strengthened and enlarged by exercise, in a manner analagous to muscles, is a familiar example of such a theory and its curricular consequences. Whether these theories were the product of observation or speculation, each was the root of proposals by which agencies external to the learner might intervene in the interests of rendering the path somewhat smoother. With this historical precedent in

literatures of the educative processes, it appeared eminently unreasonable to deviate in the absence of specific cause.

A second factor also contributed to the basis of division. Each of the divisions represents one facet of the problem, and in many instances it may be the reader's intention to study or seek information solely about a single phase. The evidence for this is to be found in the abundant writings on such topics as the psychology of learning and curriculum planning.

As one surveys the wealth of material, one is overwhelmed with the inadequacy of any classification or abridgment whatsoever. Valuable insights and expansion of the themes must inevitably be lost. However, the standard and stereotyped division decided on is feasible as the writers have clearly touched on each phase.

Moreover, throughout there will be found implicit and explicit recognition of the inter-dependence of the factors or divisions as we have laid these down. Providing this is fully established, we may follow the precedent of such scientific fields as physiology where organic systems which are known to be inter-dependent in operation are studied for simplicity as if they functioned in isolation. We are in fact obliged to follow this procedure. So long as we remain aware of its deficiencies and from time to time draw attention to the inter-relations, the result is a clearer view and firmer grasp of the fundamental propositions.

We may touch lightly on some of the material before us to indicate in a general way that, pending more detailed examination which properly forms the body of this dissertation, the authors' opinions show certain elements in common, and that we may more or less completely encompass them by the course laid down.

We may note at the outset, that each of the writers is impressed by

need for guidance and direction of the capacities exhibited by the young child. Dewey finds the infant dependent on those around him for the satisfaction of his needs from the first breath he draws. He goes on to lay the premise of the inter-dependency of the members of the community and from this the conclusion that all education is to make this relationship possible and profitable. We shall see that Aristotle and Plato are led to the conclusion that the child cannot be happy until he has attained to knowledge by which he may do fine actions and in which they conceive man's happiness to consist. Education, for them, will in consequence be found to have its primary purpose in effecting this process.

Each of the writers lays stress on the place of early training. Plato and Aristotle make provision for the environment of children to be free from low or mean influences in story, picture, etc. Whitehead says the most important training is given in the homes before the age of twelve. Dewey emphasizes the need for a varied background of experience on which to build vocabulary, and acceptance of the social pattern of the group through shared activities.

The classical writers make no special mention of the importance of language to learning and increased maturity of thinking, but we shall see that Dewey and Whitehead explicitly owe much of our cultural heritage to its development as a racial and personal possession.

There will be evident a fundamental difference in the ideas of what constitutes knowledge in the views of our writers. It will be shown that Dewey conceives it as a body of integrated associations and meanings, gained from activity and experience, which makes future information and experience meaningful and on the basis of which that information is selected and arranged. Plato and Aristotle, on the other hand, commence with a division into two types of knowledge, called by Plato productive and educative.

While they would allow that the first rests on observation and experience, the second is at least superficially purely mental in constitution. Plato considers that absolute or ultimate knowledge comes only when the mind leaves the realm of the changeable as recorded by the senses and turns to a contemplation of the changeless which the mind cannot attain or be informed of by means of the senses.

A sidelight to this attitude will be found, however, in his conception in the Phaedo that learning represents a reminiscence or recall or what is known a priori by the individual. This is to be evinced through proper directions or questioning. We may note as a result that there is a certain generic similarity of this learning through the instrumentality of influences from the external world or persons and things to the Dewey conception of learning from a discovery and systematization of the factors of the environment.

The ancient writers were, to a large extent, influenced by the tradition of their time with respect both to the need for a combination of character, practice, and instruction suited to the production of the highest worth, or 'virtue', and also with the inevitable restriction which this imposed as to the number who might be given the ideal training. A cardinal point will be found in their conception of the state as existing for the purpose of enabling man to attain the optimum development of his potentialities. The promotion of the good of the state is thus an immediate end to be sought in the light of its results. Consequently as we proceed, we find a strong emphasis on educating for the particular organization of society under which the individual is governed. As the philosophers examine a variety of possible forms of government, both Aristotle and Plato are persuaded that in the natural scheme of things, there are those who are destined to rule, and others to be ruled. They favour some form of rule by a few, in consequence. This is in sharp

contrast to the underlying and implicit acceptance of the democratic philosophy as the bulwark of their proposals found in Dewey and Whitehead. It is evident without any special proof or amplification, that Plato and Aristotle are, in fact, discrediting a phenomenon resembling Dewey and Whitehead's democracy in name only. It should be remarked at the outset that 'democracy' for the former was in their experience the disorganized holding sway by the mob. For the latter, however, it is a functioning and vital principle influencing the direction of intellectual affairs in philosophy, education, etc. - not merely a form of political organization or constitution.

A further basic distinction will become increasingly clear as this work progresses, this is the concept of the elements of change and permanency in the state. We find that Aristotle and Plato adduce their social purposes of education from a conviction that the state is a harmonious, more or less fixed structure which can, and indeed must, educate towards the perpetuation of its essential features. In part at least, as a result of writing as heirs to the doctrine of evolution and in the light of the rise of science and the growth of technology, Dewey and Whitehead view it as being involved in a process of extension and refashioning. It will be seen that they are concerned to ensure that the children are fitted by the educative process to participate in a society so conceived.

The foregoing remarks might incline the reader to allign the two classical writers, and the two modern writers into two distinguishable schools of thought each with a close alliance of ideas within it. However, nowhere will such a clear-cut distinction be discovered on closer examination. Two aspects might be instanced in this respect. Whitehead admits of less flexible bounds between subjects than does Dewey. Secondly it will be found

that while Plato envisages education as serving to produce philosophers who will serve as rulers, Aristotle is intent on training for maximal employment of leisure, Dewey for adjustment and contribution in the social group, and Whitehead combines the latter two within his aims.

In the foregoing analysis, it is apparent that no reference has been made to the function of the teacher. It will in reality become evident the teacher's influence is a factor within each of the fields delimited. However, a final chapter has been added recapitulating and clarifying the position of the teacher in the examined theories of the educative process.

As one concludes a close study of historical or philosophic nature, one is rendered more conscious of contrasts and inconsistencies in our time.

There are a number of ways in which the current major educational issues may be stated. Should the primary aims of education be defined in terms of the all-round development of the individual or in terms of intellectual training and mental discipline? Should everyone receive the same education at least to the termination of what is generally termed secondary school, or should there be a definite provision for individual differences and needs? Should we keep the individual with his abilities, interests and predispositions as the focus of our attention, or should education be primarily a social function with the demands of society to rank uppermost in our minds? Should education be 'liberal' and up to what point are its claims more valid than those for specialist study?

There is a fertile field of commentary and interpretation which might well grow out of the applications of our basic analysis to these questions in contemporary educational thought and planning. It would be necessary to trace the influence of certain aspects of the theories presented, on the history of education, and would be consummated in an evaluation of the

respective significance which they hold or might well hold in present-day educational thought. It is not however within the limits of this work to do more than present the material from which these influences originated. The reader will nevertheless be impressed with the import of inferences which have been or might be drawn in actual practice.

CHAPTER ONE

THE LEARNER IN THE EDUCATIVE PROCESS

Learning or terms which in one form or another convey the same meaning are found in every language - apprentice in English, 'apprendre' in French, and so on. What is learning? Is it not that process by which an individual develops a skill or achieves mastery of a body of information? This however is not a definition but solely a description of the process. As we survey the heritage of learnings of the race, and the personal store of learning of the child, two categories may be distinguished - the casual or incidentally acquired, and the formally arranged bodies of information which we term subjects. Thus we must first investigate to see the method which permits acquisition of both types, since this manifestly does take place. Descriptions or theories of the mechanism of the learning process must rest on a theory of mind, and its relation to its environment. The reception of data from the material world, mental perception of them,the conceptual level of mental activity are thus just a few of the considerations to be studied if we are to analyze the learning process. (The term 'learner' will be used frequently to denote primarily the child who is engaged in learning,without excluding learning which may take place in later life unless this is stipulated.)

As we survey the relevant material, we find that two thousand years in time, and the growth of a science of psychology based on experimental method and with a vocabulary of its own, have imposed terminology and varying methods of approach which at times may prove confusing as we search for the inate ideas. Evidently also, the material requires further sub-division.

After a careful study, five sub-topics were decided upon as marking reasonably clearly defined aspects of a consideration of the learning process, with respect to the individual concerned. These are:

I. THE PLACE OF SENSATION OR OF PERCEIVING THROUGH THE SENSES.

II. THE RECEPTION OF THESE SENSATIONS BY THE MIND - OR PERCEPTION.

III. THE COORELATION OF SENSORY INFORMATION AND ITS PLACE IN CONDUCT.

IV. INTER-RELATIONS OF PERCEPTIONS PRODUCED THROUGH DELIBERATE INFLUENCES OF EDUCATION.

V. THE OUTCOME TO BE SOUGHT IN TERMS OF THE LEARNER-OR WHAT KNOWLEDGE IS OF MOST WORTH.

Again as was the case in the division according to chapters, each section is to be recognized as far from being arbitrary and absolute. Nevertheless, the same reasons of their constituting customary elements, and of the absence of explicit reason to do otherwise have prevailed. It offers certain conveniences, moreover, from the point of view of ready reference to phases of the learning process and their attributes. The division has, in addition, made it possible for the writer to perhaps indicate more clearly than could otherwise be done the degree of emphasis laid upon the various aspects by the four educators concerned. Plato, it will be found, for example, lays scant store on the results to be attained from Items One and Two above, while his description of the process described under Item Three varies widely from the other three writers. Dewey specifies the contribution and relation of the first three but undoubtedly would be concerned to ensure that we recognize the unity and concomitance of the process they describe. Item Four will serve to give us some intimation of material more fully treated in the third chapter. The final item representing as it does the fruition of the learning process, will mark wide divergence in the terms and goals of the writers. Finally it should be remarked that we have been at pains to emphasize the essential inter-dependence of the factors listed, as parts of a whole.

I. THE PLACE OF SENSATION OR OF PERCEIVING THROUGH THE SENSES: A quotation of Wallace's is necessary in introducing Aristotle's writings -

> "It may be said at once, that no English word can fully represent what Aristotle meant by ψυχη'.....'Mind' might well be said to occupy the same place in psychology of our day, which ψυχη' did in Aristotle's times.... but.....'mind' means at once less and more than Aristotle's word. 'Psychic force' is therefore equally objectionable.....'Soul', on the other hand, would seem to be free from some of these defects. It is, no doubt, coloured for us by religious and moral considerations..... The Soul of a plant and the soul of a man are alike the central vivifying element..... And therefore though it is really impossible to stick consistently to one stereotyped equivalent..... it would seem desirable to employ 'soul' as the usual equivalent of Aristotle's ψυχη' . (1)

Aristotle sees the soul as progressively developing through the living world to its culmination in man. Thus man shows not only its highest phase, but the others as its subordinates. There are four stages so represented: There is, first, soul as the perfect realization of the nutritive and vegetative life, as evidenced in plant life, secondly the soul as equivalent to the exercise of sense and its perceptive powers, thirdly soul as expressive of desire and finally the soul as implying the action of the intellect and understanding. (2)

Faculties (or powers) are not different parts into which the soul is divided, but are only different sides or aspects of mental (soul) activity. (3) "..... the faculties which guide us in action and in the apprehension of truth are three - sense, reason and desire". (4) He then explains sensation by means of this conception of the faculties of the soul: "Perception..... takes place as a result of being moved or impressed", being "The realization of an internal faculty in response to its appropriate object". (5) Thus

(1) Psychology - Aristotle; ed - Wallace; Introd. xlviii -ix
(2) Psychology - Aris. Bk. II, ch. 2, 413,b
(Refs. to Plato and Aristotle are by Book, chapter and section and refer to edition marked in Bibliography with an asterik. References to Dewey and Whitehead will give page and paragraph of edition cited in Bibliography. The copious references make it impossible to cite them completely in the footnotes. For consistency of rendition in English - Jowett translations have been used when available).
(3) ibid.; Bk. III, ch. 9, 432, b.
(4) Nich, Ethics - Aris,; Bk. VI, ch. 2, par.1
(5) Psychology - Aris.; Bk. II, ch. 5, 416, b.

for him, "each single sense.... has a special quality assigned to it, and the sense as such never goes beyond this quality" (6)

The integral part which the possession of body organs plays in the pattern of behaviour is noted by Aristotle (7). Indeed he pursues the union of physiology, behaviour and soul a further step. A diverting sidelight, is that to him, man's endowment with hands is the consequence rather than the cause of his superior intellect. They are instruments given man in the invariable plan of nature which disposes organs to each animal according to its powers to make use of it. (8)

In order to arrive at an explanation of why sensory perceptions impinge or register on the soul, Aristotle postulates a doctrine of potential forms. This is relevant only from the implications which may be drawn from it. "....the soul is a place of forms or ideas.... and again the forms are there not in actuality but potentially". Going a step further, he states, "....the mind is in a manner potentially all objects of thought, but is actually none of them until it thinks; potentially in the same sense as in a tablet which has nothing actually written upon it, the writing exists potentially. This is exactly the case with mind" (9).

That the mind should be thus capable of all perception and reactions which it undergoes, if they are to be received, is fairly evident from his analogy. However, his expansion of this idea should be noted explicitly - "Now actual knowledge is identical with the thing known, but potential knowledge is prior in time in the individual..... yet not universally prior even in time. For it is from something actually existent that all which comes into being is derived. (10) We might refer to Dewey's statement

(6) ibid. - Bk. II, ch. 6, 418,a
(7) ibid. - Bk. II, ch. 2, 412,b
(8) De partibus animalium - Aris.;sec. 687,a
(9) Psychol. - Aris.;Bk.3, ch.4, 429,a
(10) ibid. - Bk. III, ch. 4, 430, a-431,a

that "Every activity or idea of mind may be regarded as telling us something. The mind is not what it was before the idea existed, but has added information about something to its store." (11) Aristotle's conception of the specific reactive nature, of each sense organ, is of course the source of his conclusion; while Dewey is actually arguing for the cumulative effect of experience - "We know with what we have known" (12)

Plato's writings on the specific mechanism of sense perception are justifiably limited. Moreover, he did not share Aristotle's interest in the exploration of natural and biological phenomena. Clearly he makes no attempt, nor would he accept any concept which laid knowledge of any but the barest facts of existence to the mechanism of sense. He says, "We know all that we see and hear" (13) In the Timaeus, he then states "..... God invented and gave us sight to this end - that we might behold the courses of intelligence in the heavens and apply them to the courses of our intelligence... the same may be affirmed of speech and hearing which is given..... for the sake of harmony.(14).

Elsewhere, he states "Knowledge is related to existence and knows existence: but I will first make a division..... by placing faculties in a class by themselves: they are powers in us and in all things by which . we do as we do.....Sight and hearing for example, I should call faculties.... and that which has the same end and the same operation I call the same faculty.....Certainly knowledge is a faculty" (15). In the light of still another Dialogue we are clearly not to establish a close relation in the final analysis between knowledge and the other faculties which he has mentioned here. As there is no sensory reception of the idea of existence,

(11) Psychology - Dewey;p. 15,b
(12) ibid. - p. 142,b
(13) Theaetetus - Plato; sec.163
(14) Timaeus - Plato §. 47,a
(15) Republic - Plato; Bk. V, 477,c

likeness and unlikeness, as such, he concludes that these ideas must result from a mentally conceived notion independent of sensory data. (16) This point will be clarified if we include here a quotation which really relates to the second phase of the process as we have divided it. He says, "The simple sensations which reach the soul through the body are given at birth to men and animals, by nature, but their reflections on these and on their relations to being and use are slowly and hardly gained, if they are ever gained, by education and long experience". (17). This will be explained later as he proposes his theory of learning as reminiscence. He sums up however, in terms which are relevant at this point in our study. "Then knowledge does not consist in impressions of sense, but in reasoning about them; in that only, and not in the mere impression, truth and being can be attained." (18).

Thus the two Greek writers recognized the existence of a mechanism of sense reception and its importance as the source of knowledge of the external world. Beyond this, they have made no claims for it.

Dewey in his Psychology and in the course of his other writings states and utilizes the findings made in this field by experimental science. Firstly he states that "Numerous as seem the various ways which bodies may affect us, it is found that these various modes are reducible to one, motion" (19). This is translated into physiological motion before sensation arises: "Three steps are to be distinguished: first the excitation of the peripheral organ, second the conduction.....along the nerve fiber to the brain, third, the reception of the reaction upon the transmitted stimulus, by the brain." (20).

(16) Theaetetus - Plato; sec. 185
(17) ibid; sec. 186
(18) loc. cit.
(19) Psychology - Dewey; p. 28,b
(20) ibid; p. 31,b

Dewey emphasizes that sensations are not as excitations of sensory organs or as received by the brain to be viewed as knowledge. "They are the necessary conditions or raw materials for knowledge..... the sensation must be elaborated and transformed and made to point to something beyond itself". (21). Thus he views sensation or feeling as the subjective side of consciousness, whereas its systematization and inter-relation give rise to an objective side, which he would define as knowledge. (22). He stresses that only these sensations or elements of intelligence which through their combinations, constitute knowledge, can be viewed as the foundation of our knowledge of existence (23). "No amount of conceptions of thought material could by itself discover any knowledge of existence, no matter how elaborate be the conceptual system and how inherently coherent.....The senses are existentially speaking the organs by which we obtain the material of observation." (24).

While the importance which Aristotle lays to sensation has already been indicated, it will be shown later that the ultimate in knowledge is, for him, that body of information which is arrived at primarily without reference to external sources, that is abstract or speculative knowledge. It is necessary to point out this feature to make clear the contrast to Dewey's opinion, and the criticism of Aristotle to which it leads. Dewey's comment is that "The isolation of intellectual disposition from concrete empirical facts of biological impulse and habit formation entail a denial of the continuity of mind with nature. Aristotle asserted that the faculty of pure knowing enters a man from within as through a door..... These views follow naturally from a failure to recognize that all knowing, judgment,

(21) ibid; p. 35,b
(22) Psychology - Dewey; p. 23,b
(23) ibid; - p.27,a
(24) Quest for Certainty - Dewey; p. 177,b

belief, represent an acquired result of the workings of natural impulses in connection with environment". (25). Dewey's whole pedagogy is founded upon this belief that "Even apart from its intrinsic value as a source of efficient action and of happiness, the proper development of the mind depends directly upon the proper use of the muscles and the senses." (26).

Whitehead, as we would expect, accepts and incorporates the findings of scientific knowledge of sense, perception and habit-formation. He reiterates the fundamental quality of sensations as the raw material for the functioning of the mind: "Mankind perceives, and finds itself thinking about its perceptions". (27). "When we speak of sense presentations we mean those primary thoughts essentially involved in its perception". (28). These 'primary thoughts' are the result of the fact that "the body is composed of various centres of experience imposing the expression of themselves on each other". (29). It is not surprising that he goes on to a statement that the human body is the region of the world which is the primary field of human experience. (30).

His acceptance of actual experience as the basis for organized thought is an indication of the fundamental place it occupies in his views. The purpose of science has its starting point in "....the discovery of the relations which exist within that flux of perceptions, sensations, and emotions which forms our experience of life. The panorama yielded by sight, sound, taste, smell, touch and by more inchoate sensible feelings, is the sole field of activity". (31). It is not our purpose to pursue his treatment of the method of science further, but the quotation gives us an indication of the place of sensory information in his analysis.

(25) Human Nature and Conduct - Dewey; p. 186,b-187,a
(26) Schools of Tomorrow - Dewey; p. 7,b
(27) Organization of Thought - Whitehead;p. 135
(28) ibid. - p. 137
(29) Modes of Thought - Whitehead; p. 32
(30) ibid.- p.30
(31) Organization of Thought - Whitehead; p. 138

II. THE RECEPTION OF SENSATIONS BY THE MIND-OR PERCEPTION: Of the four authors under consideration, Dewey writes most explicitly of his views on the transformation of perceptions into intelligent and related patterns on which experience is built, whichcomprise thinking and, to his mind, knowledge. For this reason, it is useful to open the discussion with some of his statements.

He says, "There is doubtless a great mystery as to why any such thing as being conscious should exist at all. But <u>if</u> consciousness exists at all, there is no mystery in its being connected with what it is connected with. That is to say, if an activity which is an inter-action of various factors..... comes to consciousness, it seems natural that it should take the form of an emotion, a belief, or purpose that reflects the inter-action, that it should be....'my' consciousness".(32) He goes on to state that "So far as any state of consciousness makes us aware of something it constitutes knowledge." (33)

Clearly his use of the term 'knowledge' is not synonymous with that of the Greek writers where a distinction is made between 'productive' and 'educational' knowledge, to quote Plato's terms. (34). I nstead it is to be interpreted by his statement that "Every activity or idea of the mind may be regarded as telling us something. The mind is not what it was before the idea existed, but has added information about something, to its store. (35).

He distinguishes between bare sensation and knowledge, whose constitution lies in their <u>interpretation</u>. "The sensations furnish the data, but these data must be neglected, selected, manipulated by the self before they become knowledge. The process is properly one of idealization

(32) <u>Human Nature and Conduct</u> - Dewey; p. 62,b
(33) <u>Psychology</u> - Dewey; p. 16,a
(34) <u>Philebus</u> - Plato; sec. 55
(35) <u>Psychology</u> - Dewey; p.15,b

because it goes beyond the sensuous existence.... and gives the present datum meaning by connecting it with the self and thus putting into it significance". (36) Dewey points out that the world as known is not "a disorderly passing assemblage" of sensations; and actual knowledge is concerned with related objects connected by time and space to every other. Moreover, actual knowledge is concerned with the relations between these objects - combination, continuity, and internal relations of identity and difference. (37). This relating of sensations is for him, the essence of 'Meaning'. Whatever appeals to the investigation of intelligence, or offers it material on which to exert its activity, or responds to inquiry by producing some 'fruit' for intelligence, he calls significant or possessing meaning. (38).

In The Quest for Certainty, he states that the act of knowing is a highly complex one; experience shows that it may be best investigated by analysis into a number of definite processes, having a serial relationship. "Terms and propositions, which symbolize the possible operations that are to control these processes are designed so that they will lead one to another with the maximum of definiteness, flexibility and fertility. In other words, they are constructed with reference to the function of implication. (39). This gives rise to the enunciation of two important laws in Dewey's psychology - The Law of Association and The Law of Selection. The first has three phases:

1. Simultaneous association "The activity of mind never leaves sensuous elements isolated, but connects them in larger wholes." (40).

2. Successive association - "When any associating activity recurs, all elements which have been previously involved in it, recur also..... by contiguity or

(36) Psychol. - Dewey;p. 138,a
(37) ibid. p. 86,a
(38) loc. cit.
(39) p. 164,c -165,a
(40) Psychol. - Dewey;p. 90,b

similarity". (41)

3. Composite association - "The majority of associations are complex, involving spatial and temporal association together with simultaneous fusion (new association)". (42)

He summarizes this discussion by saying. "The state of mind without associations may be compared to a fluid; that on which associative powers have been at work, to the fluid crystallized and therefore made into solid forms and positive shape". (43) He mentions in passing that the distinction between the world's artists and teachers from its investigators and formulators lies in the fact that the first use the bond of association, while the second remark upon it. We might be tempted to ask whether in his curriculum and method, Dewey adequately meets the needs of both groups which he mentions.

The Law of Selection states that "The mind neglects the sensuous presentations of everything which cannot be regarded as a sign of something.... knowledge always consists of interpreted sensations". (44) All that we call routine or habit is the result of associative activity which thus forms a "self-executing mechanism" whereby the mind is freed by adjustment to its environment, to turn consciousness to novel and variable elements in experience. (45).

It has already been stated that Dewey regards sensation as the only foundation of conceptual thinking. It is time now to see the other limits which sensation or experience lay on thinking. This is his view: "All conceptions are hypothetical.....But their final value is not determined by their internal elaboration and consistency but by the consequences they

(41) ibid; p. 92,b
(42) ibid; p. 102,c
(43) ibid; p. 111,b
(44) ibid; p. 136,a
(45) ibid; p. 113,c

effect in existence, as that is perceptibly experienced." (46) "When..... it is seen that the object of knowledge is prospective and eventual, being the result of inferential or reflective operations which redispose what was antecedently existent, the subject matters called respectively sensible and conceptual are seen to be complementary in effective direction of inquiry to an intelligent conclusion." (47). Finally this quotation related to the same discussion should also be mentioned: If action is the basis and touchstone of ideas, as he believes, then"..... the experimental practice of knowing when taken to supply the pattern of the philosophical doctrine of mind and its organs, eliminates the age-old separation of theory and practice. It discloses that knowing is itself a kind of action, the only one which progressively and securely clothes natural existence with realized meaning." (48) Thus when knowledge is so recognized as a mode of doing, it is seen to legitimately involve bodily instruments. In the relation of mind to body, and through it with the external world, a conflicting dualism or uncomfortable alliance is averted. He concedes on the physiological level, observation of facts, discrimination by sensation and response through the individual's actions, are at once of a lower level than the basis of such actions as have direction and deliberate consequences, and so constituted possess a mental quality. (49).

On the topic of the importance and relation of perception and conceptual organization by the individual, we have a comment about Whitehead by Dewey: "In his Adventures of Ideas (p.287), Whitehead writes as follows, 'it is customary to contrast the objective approach of the ancient Greeks with the subjective approach of the moderns....But whether we be ancients or moderns

(46) Quest for Certainty - Dewey; p. 165,b
(47) ibid; p. 181,b
(48) ibid; p. 167,c
(49) ibid; p. 231,a

we can deal only with things, in some sense experienced' - Since I fully agree with this statement, my only comment is that it involves repudiation of the view that approach through experience is ipso facto subjective". (50) This belief of Dewey's that the grist for the mind can come only from its environment as known through the senses is a constantly recurring theme. Moreover, the ultimate soundness of any mentally conceived action or conception is to be judged on the basis of the consequences in action of which it is the cause. If we may accept Dewey's interpretation and conclusion of Whitehead's remark; he shows general concurrence with this view point.

Dewey sees three more or less typical and distinct phases in the growth (used in the sense of accretion) of subject matter in the learner's experience. First - an intelligent ability or power to do; second - deepened meanings through communication, and added information; and finally its rational organization and systematization resulting in relatively complete knowledge or "expertness" with respect to that field of information. (51)

Apart from the foregoing statement of Whitehead's, we find little further bearing on the topic of direct use of sensory information by the mind. Nevertheless, the importance which he attaches to the place of sensation in the functioning of mind is categorically stated: "I do not know who is responsible for the analogy of the mind to a dead instrument.....Whoever was the originator, there can be no doubt of the authority which it has acquired by the continued approval which it has received from eminent persons. But....I have no hesitation in denouncing it as one of the most fatal, erroneous and dangerous conceptions, ever introduced into the theory of education.....The mind is never passive, it is a perpetual activity, delicate, receptive, responsive to stimulus". (52)

(50) "The Objectivism-Subjectivism of Modern Philosophy" from Problems of Man - Dewey;p. 309
(51) Democracy and Education - Dewey;p. 216,b - 217,a
(52) Organization of Thought - Whitehead;p. 12

This opinion leads him to state a little later in the same book that, in education, it may be laid down as an axiom that you will come to grief when you forget that your pupils have bodies. "There is a coordination of sense and thought, and also a reciprocal influence between brain active, and material creative activity." (53) He compares the animal body in its ultimate functioning to a feudal society under the sovereignty of a single overlord. The reacting organism is, at once a single center of experience, and on a higher level than each of the contributing bodily sensations, each of which is capable of limited feeling and "emotion". Each of these centers of experience forms a part in the vast and complex variety of receptors whose stimuli impinge on the consciousness. (54) The final unity of the intellect is also the organ for dealing with novel situations and also of introducing new modes of reaction. (55) A close relationship to Dewey's statements may be remarked.

Turning now to the classical writers, we find, as might be expected, that the mode of transformation of sensible material into knowing and the basis for thought, is treated from a philosophical rather than a psychological angle. Furthermore, it must be recognized that these writers give no comparable treatment to the foregoing ones.

In the Philebus, Plato states that "the power of discernment always springs from memory and perception".(56) This term is not to be understood as implying rational thinking or knowing. He divides knowledge into two parts, one educational and the other productive. It is to this second field or type of knowledge that Plato is prepared to recognize the place of sensation. Even in this latter field of productive or handicraft knowledge, he would make a division into that part concerned with mensuration, weighing and the like,

(53) ibid; p. 42, b & c
(54) Modes of Thought - Whitehead; p. 33
(55) ibid; p. 35
(56) p. 187

which is "more akin to knowledge", and the remainder, whose worth he deprecates, will be "conjecture, and the better use of senses which is given by experience and exercises, in addition a certain power of guessing which is commonly called art, and is brought to perfection by pains and practice." (57).

Two references to the Phaedo will illustrate the derivation of the other branch of knowledge to which we have referred. In speaking of the discovery of absolute justice, beauty and good, he says, "Is not the nearest approach to the knowledge of their several natures made by him who so orders his intellectual vision as to have the most exact conception of the essence of each thing.... And he attains to the purest knowledge of them who goes to each with mind alone, not introducing or intruding in the act of thought sight or any other sense together with reason, but with the very light of the mind in her own clearness.....he who has got rid, as far as he can of eyes and ears, and so to speak of the whole body, these being in his opinion distracting elements which when they infect the soul hinder her from acquiring truth and knowledge." (58) We thus see that it is to such pursuits that Plato would give the true name of thinking and that this is inimical to and impeded by the material of sense perception. For "pure knowledge" of anything, we are therefore to be quit of the body, he believes. "In this present life, I reckon that we make the nearest approach to knowledge when we have the least possible intercourse or communion with the body." (59).

Aristotle is noted for his doctrine of forms as an explanation for the manner in which the world of sense impinges on the soul, and yet is not a part of it. He states that "Thinking..... is like perception, and if so, consists in being affected by the object of thought, or in something else of that nature." (60)

(57) Philebus - Plato; sec. 55
(58) Phaedo - Plato; § 65 & 66
(59) ibid; § 67

In fact, an analysis of thinking shows it to be closely analogous to sensing; "it is the being acted upon by the thing thought..... the reception of the form of the object, not of the object itself. He claims that in general "to the separation of things from their matter (i.e. acquiring a mental image or 'form' on the basis of sensations) corresponds a difference in the operations of the intellect. (61) The imperativeness of sensation in thinking is to be found in the following statement:"..... as without sensation, a man would not learn or understand anything, so at the very time when he is actually thinking, he must have an image before him. For mental images are like present sensations except that they are immaterial." (62) It is well to note while Aristotle regards the reception of stimuli by the sensory organs as invariably true, thinking or the relating of them may be false, and at the mercy of subjective forces. (63) Nevertheless he does view the action of mind on the forms from sense and memory as the basis of thought.

To summarize, at the conclusion of this, the second section, all the writers have been found to make some acknowledgement to the place of sensory information in the process of existence. The modern writers regard this as of prime importance in knowledge, experience and construction of conceptions; Plato and Aristotle would limit its influence to skill and art in the world of sense, but would not dignify this material with the name of knowledge, by their connotation.

III. THE COORELATION OF SENSIBLE INFORMATION AND ITS PLACE IN CONDUCT

There is admittedly a close relationship between this and the preceding section. However, it is intended here to study the transition from consciousness or awareness, as produced from perception, to a treatment of habit, will,

(61) loc. cit.
(62) Psychol. - Arist.; Bk. III,4,432,a
(63) ibid; Bk. III, 427,b

and action ensuing when new perceptions are 'registered'.

All four writers have written at some length on this aspect of our topic; the modern writers are more immediately comprehensible. Whitehead offers some interesting statements for a starting point. He points out that the world of present fact is more than a stream of sensory presentations. Not only do we feel but we react to those feelings with emotions, habits, volition, imagination, deliberation and judgments. No factor which enters into consciousness exists in isolation.(64) He considers that every experience is dipolar. It involves bodily experience with the accompaying enjoyment of being something, and its converse, mental experience with its concern with forms of definiteness and abstract evaluation, in detachment from a particular situation. The higher forms of intellectual experience only occur in the event of complex integration of mental and physical experience. (65).

He states that "On the whole there is a primary region of secondary thought, as well as of primary thoughts of sense presentation, which is given in type. That is the way in which we do think of things, not wholly from any abstract necessity, but because we have inherited the method from the environment." (66) In addition there is the introduction of novelty of feeling by "entertainment" of unexpressed possibilities. Enlargement of the conceptual experience of the individual and of mankind is characterized by this reviewing of what might be or might have been - considering of the alternative. In its highest form, Whitehead owes to this process the entertainment of the Ideal. (67).

(64) Organization of Thought - Whitehead;p. 151,c
(65) Function of Reason - Whitehead;p. 26
(66) Organization of Thought - p. 139,b
(67) Modes of Thought - Whitehead;p.36

But the formulation of an idea - or ideal - has not merit per se, the individual must discover that it gives an understanding or meaning to the stream of events which pour through his life, and which are his life. Utilizing an idea is to relate it to that stream of sense perceptions, emotions and mental activities which relate thought to thought in intelligence (68).

So far we have found the place of sensation and conceptions or ideas, but what of Reason? For this we must return to the flashes of novelty about which an alternative to the chosen reaction could be projected. In its lowest form, Reason is a judgment upon a novel feature as immediately perceived, or as a factor in the operation of desire, according to Whitehead. "It operates merely as a simple direct judgment lifting a conceptual flash into an effective appetition, and an effective appetition into realized (executed) fact." (69) He then remarks that in the stabilized (or we might say routine) life, there is no room for Reason. (70).

This is a salutary warning, and one sounded more frequently and explicitly by Dewey. Any restatement of his words would only serve to detract from their succinctness:" If existence depends on adjustment to permanent factors then growth depends, no less, upon the right relation to changing factors." (71) "The man not only knows more than the child, but he is a man instead of a child". (72).

The mechanism of learning and growth from infant immaturity to adult adjustment must, when discovered, explain this growth of self. Of the many definitions of mind and thinking which have been put forth, Dewey accepts only one as adequate - his own:- "The response to the doubtful, as such

(68) Organization of Thought - Whitehead;pp. 5 & 7
(69) Function of Reason - p. 18
(70) Ibid; p. 15
(71) Psychol. - Dewey;p. 115,b
(72) ibid; p. 84,c

(as problematic)". (73) To the extent that the responses are in truth acknowledgements or reactions to the unknown or unpredicted he attributes a mental quality to them (74). "Anything that may be called knowledge or a known object marks a question answered, a difficulty disposed of, a confusion cleared up, an inconsistency reduced to coherence, a perplexity mastered." (75).

Deliberation is an experiment, mental rather than overt, in discovering what the various possible courses of action are really like. (76) In answer to the possible doubt that this type of operation does constitute knowledge, he arbitrarily dismisses it, in view of the absence in advance of a valid intimation of what comprises knowledge. (77) The fundamental and irreconcilable variance with the classical writers is so obvious as to require no further proof at this point.

He regards learning as "a necessary incident of dealing with real situations" (78) The learning process consists in voluntarily repeating an act, again and again until it separates itself from a background of varying responses and obtains a superior hold upon consciousness. (79) This is the origin of habits, he believes, which may be defined as demands for a certain definite reaction in activity. "In any intelligible sense of the word 'will', they are will. They form our effective desires and they furnish us with our working capacities." (80) As they are dominating patterns or modes of activity they cannot be directly changed, but may be indirectly modified by the operation of intelligence on the conditions or objectives of the activity. (81) Some of the influences which are

(73) Quest for Certainty - Dewey; p. 224,b
(74) ibid; p. 225,a
(75) Quest for Certainty - Dewey;p. 226,c-227,a
(76) Human Nature and Conduct - Dewey;p. 190,b
(77) Quest for Certainty - p. 229,b
(78) Schools of Tomorrow - p. 4,b
(79) Psychol. - Dewey;p. 125,b
(80) Human Nature and Conduct; p.25
(81) ibid; p.22,b

applicable in this process will be referred to in Section IV.

He also discusses a 'motive' as being an element in an act which can be viewed as a tendency to produce a specified consequence. Thus it cannot exist prior to the act, but is the act plus an intelligent judgment upon some element in it made in the consideration of the consequences of the act. (82) This point is of importance to his views on the forces which may mould and direct the learner's learning process. It is the root of his belief that interest cannot be 'drummed up' or other devices contrived, as so-called motives for the process of learning.

Plato considers that the individual has a three-fold knowledge of things - the name, the essence, and the information or connotation which these two give us.(83). He states that the discernment of an object begins with a general and indistinct image of the object as from a distance. This raises the question "What is this image?" To which the individual proposes an answer, and if he has a companion, verbalizes this opinion, as a proposition, "This is a _____". "My notion is that the soul is like a book", says Plato. "Memory and perception meet, and they and their attendant feelings seem..... almost to write down words in the soul." (84) Thus he regards sensations as being received and interpreted on the basis of past experience and becoming part of it. He clarifies on the effectiveness of perception in building up this knowledge of the external world, by an analogy in the Theaetetus. He suggests that we make "a sort of waxen figment in the mind" that a block of wax, varying in size, texture and purity from one individual to another, is to be imagined. Those perceptions of sight or hearing, or conceptions of the mind which we remember, give an impression to

(82) ibid; p. 120,b
(83) Laws - Plato; Bk. X, 895
(84) Philebus - Plato; § 38

the wax and memory of them is held so long as the impression or image lasts. (85) In other words, today we would phrase it that the power of memory varies in individuals and that the force of the perception will in a large measure control the length of time after which it may be recalled.

In the Republic (86) however, a further statement is made which is clearly at variance with the implications which the two modern writers would make from the above statement. "The soul of man is, through Reason, allied to the world of ideas and through this affinity man may contemplate it." The vision is never clear however, being confused and contaminated with sensuous knowledge and appetitions. "He progresses toward perfection according as the illusions of sense..... give place to the vision of truth and the joy in its contemplation which take their rise in the divine element of Reason".

We find general agreement with the writers of our time in the views of Aristotle relative to this portion of the topic. In his words, "Our primary ideas, our general notions, our cognitive faculties..... start from no higher source of knowledge that sense perceptions..... Amid the flux of sensitive impressions..... some one or other becomes fixed as an object of conscious observation. Once fixed, it becomes a center around which other impressions may gradually group themselves.....The process goes on in ever-widening circles until general ideas of the greatest scope are ultimately reached". (87) This generalization or induction, he feels, must be the agency by which to explain the origin of general ideas. "It seems to follow that sense is in the last resort the origin or our ideas and our knowledge." (88)

(85) ibid; sec.191
(86) Bk. VI, 508
(87) Posterior Analytica; Bk. II,19;100,a
(88) ibid; Bk. I,13; 81,b

We have already spoken of his doctrine of mental forms as the material for thought in the absence of actual sensation of the objects concerned. It seems evident that we should interpret his last statement to the effect that sense is the origin of our ideas on things and our knowledge of things. Once more we are confronted with the realization that as Bertram Russell points out, it is unwise to lay too much stress on any single passage, as it is liable to be modified or corrected in another.(89) But as Wallace comments there is no contradiction in holding that thought requires for its exercise an object suggested by sense, and yet maintaining that thought is required to illuminate this object in order that it may think it. (90) This is in fact the substance of Aristotle's statement that just as the sun communicates to objects the light without which they would be invisible,"..... this creative reason communicates to things those ideas, categories or whatever we may call them, by which they become objects on which thought as a receptive passive faculty may operate". (91)

Aristotle makes a fundamental division of the rational power of the soul into two parts: 1. that by which we speculate on those things whose principles are invariable 2. that which calculates or deliberates about those things that are variable. He calls the former faculty scientific or demonstrable, the latter calculative or deliberative.(92) He states that, "it is not about ends, but about means we deliberate". In other words it takes place concerning that in which the issue is in doubt, that which is within one's control, or which can be attained by action. Thus the speculative mind is concerned with 'science for science's sake'(to quote Shute).

(89) A History of Western Philosophy - Russell; p.162
(90) Psychol. - Aristotle; Commentary; cxiii-iv
(91) ibid; Bk.III,4; 430,a
(92) Nicomachean Ethics - Aristotle;Bk. VI, 2&5&6

The practical mind is engaged in reaching the end set by desire or appetite, and reasons its way back to the first steps needed to attain the objective. (93) "Purpose then is the cause....the efficient cause or origin of action, and the origin of purpose is desire and calculation of means; so that purpose necessarily implies on one hand the faculty of reason, and its exercise, and on the other hand a certain moral character or state of desire." (94) The conclusion in each case, may be schematized as syllogistic reasoning, and of necessity results in action. (95)

In the development of habits of mind, we control the beginnings but they acquire a momentum of their own. (96) The nature of this process may be inferred in part from the fact that Aristotle differentiates between learning, remembering and recalling. To learn a thing is to comprehend it scientifically i.e. with the scientific faculty referred to above. (97) Remembering and recalling differ in that the first is a retention of the effects of past experience whereas the second is a recovery of the effect and the sensations concomitant with it, in reality a process differing from the original learning. The nature of the difference lies in the acquired association of impulses which will contribute to complete recall. (98)

Thus we come to the end of this sub-section with markedly less agreement between the modern and classical writers. They are all forced by the circumstances and the existence of a material world around them to accept the sensory data of the individual as the foundation of much of our thought material. Whereas Dewey and Whitehead and to some extent Aristotle tend to determine the validity and consequences of such thought in the action which it initiates, Plato connects it with the mundane activities of bare

(93) Psychol. - Aristotle; 434,a
(94) Nic. Ethics; Bk. VI, 2&4
(95) Psychol.-Aristotle; 434,a and Shute;p. 64 on De motia animalium
(96) The Psychology of Aristotle - Shute; p. 78,a
(97) Nic. Ethics; 1143,a
(98) De memoria et reminiscentia - Aristotle; 451,b; 452,a

physical existence.

IV. THE INTER-RELATIONS OF PERCEPTIONS THROUGH DELIBERATE INFLUENCES OF EDUCATION

We will discuss here the scope and effectiveness of factors which have a part in relating or imparting significance to, or directing the learner's experience and reactions. Primarily because the social context of his remarks is the contemporary one, Dewey makes the most satisfactory writer with which to commence.

At the outset, Dewey accepts the indication by modern science that the native instincts of a human being are his tools for learning (99). His viewpoint that we know by what we have known, and that growth from infantile dependency to the ability to meet and participate in the world as an adult is the product of progressive enlargement of experience, has been discussed. Now it is necessary to review the steps and factors in this process. The keynote of his argument would undoubtedly be his frequent assertion that "We are constantly referring to what is already known to get our bearings in any new situation. Unless there is some reason to doubt whether presumptive knowledge is really knowledge, we take it as a net product." (100) Moreover, to his mind, it actually governs the direction of future activities. (101)

This process occurs by virtue of many activities - imagination, survey, comparison with things known are all a first step in the enlargement of knowledge. But its acceptance as knowledge, rests on some overt action,"..... by means of which an existential incorporation and organization is brought about". (102) This has given rise to the 'learning by doing' approach which has been derived from his philosophy. He did not intend the process

(99) Schools of Tomorrow - Dewey;p. 291,a
(100) Quest for Certainty - Dewey;p. 187,b
(101) Psychol. - Dewey;p. 126
(102) Quest for Certainty;p. 189,b

to rest on this, however. He believes that the mentally active scholar's mind roams far and wide, with a constant exercise of judgment to detect relations, relevancies, bearings upon a central theme. The outcome is a continuously growing intellectual integration. (103) General education therefore, consists in so familiarizing ourselves through repetition with certain objects, events and processes that we form apperceptive organs with the ready and quick apprehension of whatever presents points of connection with these; while technical education forms more particular organs of perception. (104)

As a contemporary writer, he would regard it as a truism to state that deliberate educating is necessary to ensure this process progressing at a sufficient pace. In the following sections we shall find that he is volubly averse to making this schooling a thing divorced and unrelated to the unconscious process of learning, which he regards as a necessary incident in dealing with any real situation.

More specifically, he would regard habit, interest and effort as forces which can and should be utilized in furthering the mental activities outlined above.

HABIT: To a considerable extent he considers that customs or widespread similarities of habit exist as numbers of individuals respond to the same situation. (105) (This is obviously the theory behind attempts to develop tastes in music and literature, etc. based upon the consensus of opinion of a majority of its lovers). However, according to his analysis, customs persist even more because individuals form their habits under pre-existent conditions. (106) (We might use acceptance of law, and social etiquette as examples here).

(103) The Way Out of Educational Confusion - Dewey; p.34
(104) Psychol. - Dewey; p. 126, a
(105) Human Nature and Conduct - Dewey; p. 58, a
(106) ibid; p.58, a

He adds that advice, exhortation and instructions are feeble stimuli to altering or establishing habit, compared to the impersonal forces and habitudes of the environment. (107)

INTEREST: He emphasizes that only with children having outstanding intellectual abilities is it possible to secure mental activity without participation of their organs of sense - sight, touch and the like. He is not, although maligned as such, a proponent of activity for its own sake. He surveys the development of the physical capacities of the infant, through the constructive activities of childhood, to those of youths and adults, for the purpose of proving that ".....intelligence in the form of clear-cut perception of the result of an activity, and search for and adaptation of means should be an integral part of such activities." (108) He proposes that the most satisfactory means or instrumentality is to evoke at first an interest in things concrete and close at hand, and successively expand and generalize this interest. As evidence may we cite - "It is the business of educators to see that the conditions of expression of practical interests are such as to encourage the development of these intellectual phases of an activity, and thereby evoke a gradual transition to the theoretical type. (109)

The next statement will, we hope, be its own justification of the length at which it is quoted: "The genuine principle of interest is the principle of recognized identity of the fact to be learned or the act proposed with the growing self; that it is in the direction of the agent's own growth, and is therefore imperiously demanded if this agent is to be himself. Let this condition of identification once be secured and we have neither to appeal to sheer strength of will, nor to occupy ourselves with making things

(107) Human Nature and Conduct; p. 22,b
(108) Interest and Effort in Education - Dewey;p. 82,a
(109) ibid; p. 83,a

interesting". (110) Thus for him interest is, and is the mark of, a unified activity; and reliance on it is legitimate so long as the identification of the material with the self is genuine and not an artifice. (111)

He regards study as effectual in the degree to which the pupil realizes the place of the factual or numerical truths with which he is presented in carrying to completion or fruition activities in which he is concerned. (112) Dewey is prepared to recognize the place that books and conversation have in this process but is of the opinion that present education places too exclusive reliance upon them. He believes that schools require for their maximum efficiency more opportunity for shared activities on the part of those instructed, to the end that they may acquire a social sense of their own powers and skills and of the materials used. (113)

EFFORT: Dewey states that in seeking increase in ability to put forth effort we are attempting to secure ".....persistency, consecutiveness of activity, endurance against obstacles." (114) He regards this ability as significant in carrying an activity to its fulfillment, Nevertheless, he feels that as a result of the absence of materials and occupations relevant to the learner at a particular stage in his development we have presented to him problems which are not his own, or conjured up relations to him only as a pupil rather than as a developing human being. (115) Thus we have venerated effort, as a virtue in itself, in an attempt to have this learning absorbed by the pupil, when identification and interest could not be gained for it.

Plato also associates increased skill or ability with practice - "He who would be good at anything must practice that thing from his youth upwards... in the particular way which the work requires.....Those who have the care

(110) ibid; p. 7,a
(111) ibid; p. 41,b
(112) Democracy and Education - Dewey; p. 158,b
(113) ibid; p. 48,a
(114) Interest and Effort in Education - Dewey; p. 46,a
(115) Democracy and Education - Dewey; p. 183,b

of their education should provide them when young with mimic tools." (116) Likewise he regards interest or inclination as an important factor - "The teachers should endeavour to direct the child's inclinations and pleasures, by the help of amusements, to their final aim in life." (117) In the same passage, he adds that "...the sum of education is right training in the nursery" (to be interpreted more broadly than our term.) Like Dewey, too, Plato states that the transfer from what is already known to unfamiliar material will be most effective when similar features are pointed out. Using as his example, children's knowledge of certain letters in short syllables he asks, "Will not the best and easiest way of guiding them to the letters which they do not as yet know be to refer them to the same letters in words which they do know.... and to show them that they have the same character in different combinations?" (118)

We must now come face to face with a fundamentally important feature of Plato's conception of the educative process. It has already been alluded to in the Introduction,viz. that learning is, in actuality, a recollection of knowledge which the soul possessed previously. The theory is referred to in the Meno and in the Phaedo. In the latter it is established in the interests of demonstrating the immortality of the soul. Having indicated that the mind can conceive of absolute equality, absolute beauty, absolute goodness, etc., while receiving a sensory observation of approximate equality beauty, etc. only, he concluded that it must have possessed the idea by which it judges the sensory equalities from some other source. Since we have been obtaining information from the senses since birth, he feels that this information which does not arise from the sense must have existed before we perceived in any way - His conclusion

(116) Laws - Plato; Bk. I, 643,b
(117) loc. cit.
(118) The Statesman - Plato; p. 597

is that the information must have been acquired before birth.

Cebes recites a proof from the Meno (119) "If you put a question to a person in a right way, he will give a true answer of himself, but how could he do this unless there were knowledge and right reason already in him? And this is most clearly shown when he is taken to a diagram or to anything of that sort. (120)

The importance to us lies not in the validity of his reasoning that this and similar instances indicate that the knowledge was previously held, the inference on the teaching process to be derived is, however, important. The Socratic argument continues, "But if the knowledge which we acquired before birth was lost by us at birth, and if afterwards by the use of the senses we recovered what we previously knew, will not the process which we call learning be a recovering of the knowledge which is natural to us, and may not this be rightly termed recollection?" (121)

The position is then accepted that those having knowledge can render account or expound it. Since all men are manifestly not equal in this ability, the difference must lie in the degree to which the process has progressed: "They are in process of recollecting that which they learned before." (122)

Clearly, and unexpectedly, this throws us back on the external world of material things and deliberate influences by those around for an explanation of how the learning or recollecting will be gained. Moreover, on the basis of a study of the progress of the argument in this and other Socratic dialogues of Plato, the reader is perhaps somewhat irresolute in assenting that the coterie around Socrates, did more than to accept the only feasible of the two

(119) Sec. 83,ff
(120) Phaedo - Plato; sec. 73
(121) ibid; sec. 75
(122) ibid; sec. 76

alternatives. While admittedly this might constitute the correct questioning to evince the latent knowledge, by Plato's view, it does not seem to make great demands on the answerer to search deep within himself.

Wallace comments that there is an apparent contradiction which runs through the whole epistemology of Aristotle and which makes him emphasize now the part of sense and now the work of reason in building up knowledge. (123) Nevertheless, Aristotle does give a few definite indications of his viewpoint on mastering both skills and information. In his Psychology (124) he states that the first actuality of a body possessed of organs is a close union of physiology, behaviour and soul; also that behaviour involves various factors, the foremost of which is appetence, (desire resulting in purpose, to borrow from his previous account).

On the topic of categories of knowledge, he says that each uncombined word or expression means some such thing as 'what', 'how large', 'related to what', 'how circumstanced' i.e. state or condition, 'how active' i.e. what doing. None involve any positive statement or denial until such terms are united together. (125) Might we not interpret this as the fact that perception becomes knowledge as we systematically relate fact to fact on the basis of observation and experience?

Aristotle states that habituation should be a gradual process, and one which it is best to practice from the earliest age possible. (126) Much of his educational method we shall find is to be directed by legal regulation and so is preferably treated later. However one further point in deliberate education might be mentioned here. This is his discussion of the factors in habit formation and recall of information as presented

(123) Psychology - Aristotle; Commentary xcvii
(124) section 412,b
(125) The Organon - Aristotle; Categories section 1 & 2
(126) Aristotle on Education - Burnet; p. 102

in De memoria et reminiscentia (sec. 451, 452). The factors which Aristotle thought favoured quick recall are still familiar to us. Frequency is recognized as being one. What we call intensity is listed implicitly in the fact that he claims that some impulses experienced but once are more effective in forming habits, than others repeated many times. But the most powerful factor is the association of impulses corresponding to the succession of the original objects. Thus to recall, one should not start a general search but seek to get on the track of impulses which are so associated and they will by the momentum of all habits of mind lead of themselves to the object sought.

Whitehead prefaces his remarks relevant to this topic by the warning above all things to beware of what he refers to as "inert ideas", that is ideas which are merely received into the mind without being utilized or related or thrown into combination with other ideas. (127) He is equally definite in stating that education must pass beyond the passive reception of ideas of others. Powers of personal initiative must be strengthened in action, in thought and in the imaginative field of art. (128) He turns to Greek logic which has been tested for centuries for the criteria on which information and belief should be judged - clarity, internal and external consistency, conformity or absence of discordancy with experience. (129)

He denounces the degeneration of algebra into gibberish and of certain other subjects into an assemblage of unrelated facts, which he cites as pathetic instances of the uselessness of reforming educational schedules without a clear conception of the attributes which you wish to evoke in the living minds of children. (130) He pleads that "we shall

(127) Organization of Thought - Whitehead; p.4
(128) ibid; p.36
(129) Function of Reason - Whitehead; p.53
(130) Organization of Thought - Whitehead; p.15

endeavour to weave in the learner's mind a harmony of patterns, by co-ordinating the various elements of instruction into subordinate cycles each of intrinsic worth for the immediate apprehension of the pupil." (131) He adds that the most valuable intellectual development is self-development, taking place for the most part between the ages of sixteen and thirty. (132)

In the preface to the Aims of Education and other essays, Whitehead says one main idea runs through the chapters, "The students are alive, and the purpose of education is to stimulate and guide their self-development". He believes that guidance along the path of self-development in which ideas will be meaningful and fresh will vary in procedure depending upon several factors, all of which are important. ".....the genius of the teacher, the intellectual type of the pupils their prospects in life, the opportunities offered by the immediate surroundings of the school, and allied factors of this sort." (133) He goes on to enunciate a view of the Rhythm of Education, that is "....that different subjects and modes of study should be undertaken by pupils at fitting times when they have reached the proper stage of mental development." (134) Moreover, he believes that lack of attention to the rhythm and character of mental growth is a main source of "the wooden futility in education". (135)

One further statement of his message, (which will be more fully treated in considering the teacher in the educative process) should be mentioned to illustrate the similarity and variation from Dewey's views. "Education is the guidance of the individual towards a comprehension of the art of life; and by the art of life I mean the most complete achievement of

(131) The Rhythm of Education - from The Aims of Education - Whitehead;p. 33,a
(132) Organization of Thought - Whitehead;p. 4,a
(133) Organization of Thought - Whitehead;p. 11
(134) The Rhythm of Education - from The Aims of Education - Whitehead;p. 24
(135) ibid; p.27

varied activity expressing the potentialities of that living creature in the face of its actual environment." (136) In the course of this process he believes, that "Unless the pupils are continually sustained by the evocation of interest, and the acquirement of technique, and the excitement of success, they can never make progress, and will certainly lose heart." (137)

Thus at the conclusion of this section it is utterly impossible to draw comparisons; the terms of the writers and the portion of the field covered have varied so broadly. Dewey is chiefly concerned with the actual method of instruction and the influence to be utilized; Whitehead has pointed out evils of certain methods. Aristotle and Plato have indicated certain features to be kept in mind but the former has given no extensive treatment to a theory of teaching apart from the learnings which he desires to be given; Plato's offers difficulties in applicability.

V. WHAT KNOWLEDGE IS OF MOST WORTH? WHAT IS THE ULTIMATE END FOR THE LEARNER?

This account comes at the conclusion of an account in so far as this proved possible of the theory of learning of each of the writers. We have seen the place of sensory data, its relation as perception, and of perceptions as experience, habit, etc., as well as some of the influences which may be brought to bear on the process. In essence, the ultimate goal with respect to the mental outlook or intellectual estate of the learner involves, above all, a claim for what education is seen as having the greatest merit. This is, of course, found in part in the conception of the place education is to have within the community.

Most modern men take it for granted that empirical knowledge is dependent upon, or derived from, perception. There is however in Plato and

(136) The Rhythmic Claims of Freedom and Discipline from the Aims of Education - Whitehead; p. 61
(137) ibid; p.60

others a very different doctrine, to the effect that there is nothing worthy to be called 'knowledge' to be derived from the senses, and that the only real knowledge has to do with concepts.

He begins by pointing out that we perceive <u>through</u> eyes and ears, rather than <u>with</u> them, and goes on to point that some of our knowledge is not connected with any sense organ. There is no sense organ which perceives likeness and unlikeness, sameness and differences, good and bad, etc. The mind is thus seen to contemplate certain objects through bodily faculties, others through its own instrumentality. Only the mind can reach existence, and we cannot reach truth if we do not reach existence. It follows that we cannot know things through the senses alone, since through the senses alone we cannot know that things exist. Therefore knowledge consists in reflection, not in impressions, and perception is not knowledge, because it has no part in apprehending truth, since it has no part in apprehending existence. (138)

The soul being eternal is at home in the contemplation of eternal things, or essences, but is lost and confused by the contemplation of the world of sense perception: "The soul when using the body as an instrument of perception, that is to say, when using the sense of sight or hearing or some other sense.... is then dragged by the body into the region of the changeable, and wanders and is confused.....But when returning into herself she reflects, then she passes into the other world, the region of purity, and eternity, and immortality, and unchangeableness, which are her kindred, and with them she ever lives, when she is by herself, and is not let or hindered; then she ceases from her erring ways and being in communion with the unchanging is unchanging. And this state of the soul is called wisdom". (139) If we mentally underline the final sentence, no further comment is called for, we believe.

(138) <u>Theaetetus</u> - Plato; sec. 184
(139) <u>Phaedo</u> - Plato; sec. 79

Thus we see that the theme rather than any direct and concise statement testify to Plato's views on the ultimate aim of education. However, the following statement gives us some idea of what the end-product of the process of education was to be. "I mean by education that training which is given by suitable habits to the first instincts of virtue in children; when pleasure and friendships and pain and hatred are rightly implanted in souls, not yet capable of understanding the nature of them, and to find them, after they have attained reason, to be in harmony with her." (140)

We have already seen that Aristotle in his Psychology regards the soul as that which confers substantiality upon living beings; and its highest form or element to be found only in man. In the Nicomachean Ethics he divides the soul by a similar doctrine into rational and irrational parts. (141) The life of the rational soul consists in contemplation, which is the complete happiness of man, though not fully attainable. "Such a life would be too high for man; for it is not in so far as he is man that he will live so, but in so far as something divine is present in him; and by so much as this is superior to our composite nature is its activity superior to that which is the exercise of the other kind of virtue (the practical kind). If reason is divine, then, in comparison with man, the life in accordance with it is divine in comparison with human life. But we must not follow those who advise, being men, to think of human things.....but must, so far as we can, make ourselves immortal, and strain every nerve to live in accordance with the best thing in us." (142) We have once more quoted at sufficient length for the passage to be self-explanatory.

There is no corresponding material from our modern writers for the reason that they speak in totally different terms. Whitehead does show concern

(140) Laws - Plato; Bk.II, 653
(141) section 1102,b
(142) ibid; section 1177,b

for occupation with knowledge and values which are above and beyond the exigencies of everyday existence, it is true, however, "Education is the guidance of the individual towards a comprehension of the art of life; and by the art of life I mean the most complete achievement of varied activity expressing the potentialities of that living creature in the face of its actual environment. This completeness of achievement involves an artistic sense, subordinating the lower to the higher possibilities of the indivisible personality. Science, art, religion, morality, take their rise from this sense of values within the structure of being. Each individual embodies an adventure of existence. The art of life is the guidance of this adventure." (143)

Dewey states that special theories of knowledge differ enormously from one another, all of which hold that the operation of inquiry excludes any element of practical activity as entering into the construction of the object known. "The common essence of all of these theories is that what is known is antecedent to the mental act of observation, and inquiry is totally unaffected by these acts" - in order that it may be fixed and unchangeable. (144) This view leads, he says, to certain inevitable errors. "Either logical characters belonging to the operations of effective inquiry are read into antecedent existence; or the world as known is reduced to a pulverized multiplicity of atomically isolated elements..... or some machinery is devised to bring the two together". (145)

Dewey then states that the foregoing is not intended to deprecate from the immense importance of previous knowledge, it is intended to deny that this previous knowledge must be immediate or intuitive. "The conclusions of

(143) The Rhythmic Claims of Freedom and Discipline from the Aims of Education - Whitehead; p. 61
(144) Quest for Certainty - Dewey; p. 22,b - 23,b
(145) ibid; p. 180,c - 181,a

prior knowledge are the instruments of new inquiry, not the norm which determines their validity." (146)

It is characteristic of Dewey that while he is constantly issuing clarion calls on the inadequacies of our present methods, and for revision of our aims, it is difficult to abstract a definite pronouncement on what is the ultimate in knowing. In any case he would phrase and relate it to the social scene. The following two will illustrate:

"As traditionally conducted, it (Education) strikingly exhibits a sub-ordination of the living present to a remote and precarious future. To prepare, to get ready, is its keynote.....the professed exaltation of the future turns out to be a blind following of tradition. If education were conducted as a process of fullest utilization of present resources, liberating and guiding capacities that are now urgent, it goes without saying that the lives of the young would be much richer in meaning than they are now." (147)

"Knowledge is a perception of those connections of an object which determine its applicability in a given situation.....An ideally perfect knowledge would represent such a network of interconnections that any past experience would offer a point of advantage from which to get at the problem presented in a new experience." (148)

Our writers' fundamental positions and differences are even now apparent, and it will be the task of the next two chapters to show what materials they recognize as they conduct their learner to the knowledge which is of most worth.

(146) ibid; p. 186,c
(147) Human Nature and Conduct - Dewey;p. 270,a
(148) Democracy and Education - Dewey; p. 396,b

CHAPTER TWO

THE CURRICULUM IN THE EDUCATIVE PROCESS

The term 'curriculum' in the chapter title has been used to cover the body of knowledge to be taught and is to be taken in its very broadest sense. It is intended only to identify that material which the learner acquired (or so we hope) in the course of the educative process. It is to be remembered too that any school will seek to give definite insights and directives which are not encompassed by subject divisions, but which the individual is to gain. "Corpori, menti, moribus" - the motto of a local high school - represents this sentiment. This too is to be read into our term 'curriculum'.

Our first task is to discover the views of the authors with respect to what constitutes the subject matter for the educative process. We have already seen that the classical writers have a firm belief that this term is not synonymous with, let us say, the 'collective racial experience'. The term 'cultural heritage' is commonly used when the scope of what education is to impart is discussed. Clearly this term indicates more adequately what the Greeks had in mind as the subject matter of knowledge to be imparted.

In the initial stage, as a result, all we will set out to find will be some indications as to what body of knowledge the writers recognize. This will form Section One of this chapter.

It will then be convenient to study the categories into which they classify this body of knowledge, or in simpler terms, to study the curricula which they recognize. The authors' opinions on the respective merits of these in the ultimate development of man are inextricably tied up with the initial categories and so must be examined at the same time. This will constitute Section Two.

It is only for the sake of maintaining a simple and direct analysis in the foregoing section that a third section has been set off, embodying more specific treatment of components and arrangements within the curricula defined.

A warning must be once more issued, at the risk of unnecessary repetition, what is to be taught will inevitably relate and be related to the world outside the school walls. The curriculum is no less affected by social factors that is the child as a learner.

We need not take a moment's thought to recognize that the parents of every species demonstrate to and encourage their young in those skills by which self-preservation may be achieved. The difficulty arises rather in ascertaining how much of what is learned by the growing young, was in reality, taught. Our authors have all reasoned from the viewpoint that the human infant essentially is endowed with capacities rather than actual capabilities, and we have sought in Chapter One to follow their reasoning as to how development to adult status in the environment occurs.

From the time when, by laborious chipping away of one rock by another, a scraper or arrowhead, was fashioned, a new feature is met in tracing the development of native capacities. This is the imparting of the collective experience of the group.

Not only is man the only animal endowed with the ability to "look before and after" and entertain in mental experience alternatives to overt actions, but he surpasses the other creatures in creation, in the medium for transmission of his experience to others.

Dewey discusses the process in Human Nature and Conduct. At the outset, he states, men did not intend language, nor have conscious social objectives in view; instead it grew out of unintelligent babblings, gestures

and the force of circumstances. (This is substantially the modern anthropological opinion; cf. Kroeber - A Source Book in Anthropology N.Y., Harcourt, Brace & Co. Rev. Ed. 1931, 8 & 571 p.). Thus Dewey concludes, "It operated not to perpetuate the forces which produce it but to modify and redirect them.....pains are taken with its use. Literatures are produced, and then a vast apparatus of grammar, rhetoric.... Education, schooling, become a necessity; literacy an end. In short, language creates demands which take effect, and the effect ..... extends to the common life in communication, counsel and instruction". (1)

Instruction, at first by demonstration, and later more formally by precept was essential to the perpetuation of a civilization ever increasing in complexity. Needless to say, even the classical writers living amid the relatively simpler demands of their state, were obliged in considering education, to decide what learnings were to be transmitted, and to what individuals or groups.

I. THE BODY OF KNOWLEDGE: Speaking of the subject of what constitutes the material for education, Whitehead says, "There is only one subject matter for education and that is Life in all its manifestations". (2) He amplifies this view later by discrediting the "exclusive association of learning with book learning", on the grounds that the latter is necessarily second hand to a large extent, and so fails to reach the importance of immediate practice. (3)

Dewey is more specific in his delineation of the subject matter of early education and, at the same time, gives us an insight into his conception of the heritage of knowledge. His opening paragraphs of Schools of Tomorrow indicate his view. Seconding Rousseau's insistence that education

(1) Human Nature and Conduct; p. 79,b - 80,a
(2) Organization of Thought; p. 13 ls. 7-10
(3) ibid; p.43 ls. 12-18

be based upon the native capacities of those to be taught, Dewey proclaims this as the keynote of all modern efforts for educational progress. He emphasizes that, so understood, it is not something forced from without on the individual, but is the growth of capacities with which the individual is endowed from birth. (4) He feels that the first years of learning proceed surely and successfully - before the children encounter formal schooling - by virtue of the pertinence of the material learned, to their actual needs, while "the training is so closely related with motives that are furnished by their own powers". (5) Moreover, Dewey stresses that what is learned in school is only a small and "relatively superficial part of education". Its worth is exaggerated in comparison with what is gained in the ordinary process of living. It is from this latter field of unconscious, yet nonetheless effective, learnings that Dewey seeks to devise a method for the school to follow. (6)

Briefly, one might say, that the modern writers regard the subject matter of education as anything which increases man's understanding or utilization of the phenomena around him. A little later, in this discussion, we shall find that this in no way limits their appraisal of certain pursuits as being more worthy of man's rational application than others. What is to be learned is as broad as Man's skill and art, and as deep as his profoundest expression of thought.

Herein lies a vital contrast with the Greek philosophers. Plato says, "Education has two branches, one of gymnastic, which is concerned with the body, and the other of music which is designed for the improvement of the soul.....But other labours and sports, and excessive training of the body

(4) Schools of Tomorrow; p. 1,a - 2,a
(5) ibid; p. 2,b
(6) ibid; p. 2,b

are unworthy of freemen". (7) In the Laws, Plato gives a further definition of both of these: "The sound of the voices which reach and educate the soul, we have ventured to term music..... and the movement which when regarded as an amusement, we termed dancing; when pursued with a view to the improvement of the body according to the rules of art, may be called gymnastic". (8)

Adamson in his study, Plato's Theory of Education (9) states that a system of education may be the outcome of design - of preconceived plan - and adds that Plato's is emphatically an instance of this. Thus Adamson continues, while we know one objective which education would hold for Plato - namely to fit a man for life - there was another more immediate, more material and narrower; the welfare of the imaginary state of which the Republic gives an account. (10) This deduction of Adamson without doubt is borne out by Plato's social distinctions within the Republic, by which he obtains a situation where a few pursue the highest knowledge, but their ultimate function is as servants or 'magistrates' of the state.

This comment is necessary if we are to realize that the education mentioned above in Plato's account was to be given to the 'citizens' as representing the ultimate in value in human existence. With reference to dialectics and the discovery of the absolute, by the light of the Reason only, he answers the question of to whom these studies shall be assigned. He would entrust them only to "the surest and bravest.....having noble and manly thoughts", and the natural gifts "keeness and ready powers of acquisition... (and) a good memory".(11) In consequence, the pursuit of

(7) Plato's Laws;Bk. VII, 796,a
(8) Laws - Plato;Bk. II, 673
(9) Plato's Theory of Education - Adamson;p. 1,a
(10) ibid; p.14
(11) Republic - Plato;Bk. VII, 535, a & b

skill and productivity were seen as distracting and ignobling, and relegated to inferior members of the community. (12) Moreover, as we shall show in Section Two, both of the branches of education designated, were more inclusive in Plato's interpretation than today's.

Aristotle's views are to be found in his Politics and Nicomachean Ethics. (In addition to the translations, Burnet has extracted the passages relevant to education specifically. References will refer to Jowett's translation; however, the three translations consulted show so little variation as to context that no special consideration of this aspect is necessary). In the Metaphysics, Aristotle says, "...all men suppose what is called Wisdom to deal with first causes and principles of things, this is why.... the man of wisdom is thought to be wiser than the possessors of any perception whatever.... and the theoretical kinds of knowledge to be more of the nature of Wisdom that the productive". (13) Thus for him, the practical life is only the handmaid of the speculative and man's toils and striving have purpose only in rendering leisure possible. (14)

Aristotle says it is obvious that we shall have to teach our children such useful knowledge as is indispensable, it is equally obvious that all useful knowledge is not 'ipso facto' to be granted a place in education. "For occupations are divided into liberal and illiberal; and to young children should be imparted only such kinds of knowledge as will be useful to them without vulgarizing them. And any occupation, art, or science, which makes the body or soul or mind of the freeman less fit for the practice or exercise of virtue is vulgar." In this category he places those activities which deform the body, all paid employments and liberal arts studied too minutely, for "they absorb and degrade the mind." (15) Burnet translates 'Mechanical'

(12) ibid; Bk. II 376,b also Laws;Bk. VIII, 846,b - 847,a
(13) Metaphysics - Aris.;Bk. I, 1, 981,b
(14) Politics - Aris.;Bk. VIII,3 - Bekker 1337,b
(15) loc. cit.

for Jowett's 'vulgar' and the last quotation by "they allow the mind no leisure." (16)

Evidently, the Greek conception of knowledge to be transmitted is both more restricted in extent and in the group to which it is to be imparted. The works of both authors make it clear that the manual and other pursuits of the community must be learned and carried on by a definite class. However, they differ fundamentally from Whitehead and Dewey by maintaining that the collective material experience of the race is unworthy to predominate in the instruction of the young. It is well to remember also, that in a much greater extent than is true today, the demands of mere living would leave the Greek worker no mental leisure. Thus both writers faced with the need of compromise, preferred to erect a class of intellectuals, parasitic on the rest of the community, which they would control; to the alternative course of educating each individual to the level of speculation and abstract reasoning which his degree of intellectual endowment and meagre leisure would permit.

II. CURRICULA TO BE DISTINGUISHED AND THEIR MERITS: The Platonic republic was to be governed by regulations which forbade the natives or servants of theirs to be occupied in the "handicraft arts", for "a citizen who is to make and preserve the public order of the state has an art which requires much study and many kinds of knowledge, and does not admit of being made a secondary occupation". Artisans and citizens alike were to be bound by obligation and fear of opprobrium from dissentient action. Plato proposes that the wardens are to maintain this law "and if any citizen inclines to any other art rather than the study of virtue, let them punish him with disgrace and infamy". (17)

(16) Aristotle on Education - Burnet; p. 107,b - 108,a
(17) Laws - Plato; Bk. VIII, 846,b - 847,a

The minister of the education of youth, appointed according to rigorous qualifications is enjoined to consider his the greatest of all great offices. "Man.... requires proper instruction and a fortunate nature, and then of all animals he will become the most divine and civilized.... wherefore the legistlator ought not to allow the education of children to become a secondary or accidental matter." (18)

The citizen then is to be introduced in youth to the "free use of words and phrases" characteristic of a liberal education, calculation, geometry, and "all other elements of instruction" which are a preparation to dialectic. Capacity for progress in these preliminary studies is judged to be the criterion of dialectical talent. (19)

This, in summary then, is the educational offering which Plato outlined for his magistrates or chief citizens. Military personnel and other necessary officials were to be afforded a portion of the same, to promote enlightened performance of their duties. Between this, and the training for the artisans stretched an unbridgeable gulf.

It has already been stated that Aristotle favoured instruction in useful and indispensable knowledge, but did not regard all useful knowledge as worthy of a place in his curriculum. It should be remarked however, that he goes a step further. He claims there are subjects which ought to form part of education solely from a view to the right employment of leisure, that is, which are not necessary but fine and worthy of free men. (20)

It is clearly this viewpoint which has motivated the adult education movement as this is to be found in most European countries. The intention there is not to teach trade and utilitarian knowledge, so much

(18) Laws - Plato;Bk. VI, 766,a
(19) Republic - Plato;Bk. VII, 536,b - 537,b
(20) Politics - Aris.;Bk. IV,9 - Bekker 1328,b

as to afford an opportunity for those who could not otherwise obtain it, of gaining liberalizing and humane knowledge purely from the view of the aesthetic enjoyment and intellectual widening of horizons. Obviously too, Aristotle's and Plato's insistence on certain information as the right and privilege of the most influential citizens within their communities has echoed through the ages in the distinction between the education of aristocratic and artisan classes.

Whitehead considers that there are three main methods which are required in a national system of education - the literary, the scientific and the technical curriculum. Each however, is to be understood as containing elements of the other two. (21)

In its essence, Whitehead conceives a liberal education as an education for thought and by its implication of leisure, it is an aristocratic education. He says of it: "It has encouraged art, it has fostered the spirit of disinterested curiosity which is the origin of science, it has maintained the dignity of mind in the face of material force." (22) All these attributes are eminently to be sought after in our educational efforts, it is certain. However, he says that no course of study may lay claim to a position of ideal completeness. "The insistence in the Platonic culture on a disinterested intellectual appreciation is a psychological error." (23) This statement is both an explanation of his plan for a three-fold educational offering and a justification for the value he claims for the scientific and technical portions of it.

Earlier in the volume, he stated that the only use of a knowledge of the past is to equip us for the present, "for it is the past and it is the future." (24) Thus he feels that there is no antithesis between a

(21) Organization of Thought - Whitehead; p. 38 ls. 20-23
(22) ibid; p. 34 ls. 8 - 18
(23) ibid; p. 37,a
(24) ibid; p. 6 ls. 22-28

technical and a liberal education; in fact each is inadequate without the other. Moreover, no education which is true to the name does not impart both technique and intellectual vision. (25)

The relationship between general cultural pursuits and specialist offerings is seen by Whitehead as follows: General culture is designed to foster an activity of mind which is utilized in specialist study. He feels however, that the two cannot be accurately delineated. General knowledge is achieved by special subjects, specifically studied; while devotion to a particular study promotes broader mental activity. He is convinced that mankind is essentially specialist in interest, and that provision for specialization, even in the acquisition of general culture, serves to utilize individual interest. Further if this consideration is excluded, the result is stultification and death to educational vitality. (26)

The educational method of the literary curriculum, he states, is the study of language; while the scientific education uses, as its method, training in the art of observing natural phenomena, and the knowledge and deduction of the principles underlying their sequence. Technical education is essentially a training in the utilization of the knowledge so gained, for the production of material products. Again and again, he points out that it is not to be viewed as a "maimed alternative to the perfect Platonic culture." (27) Whitehead credits the enormous advance in technology over the last century and a half to the combination of the theoretical activity of Speculative Reason and the methodology of the Practical Reason in dealing with certain types of facts. (28)

(25) ibid; p. 38,a
(26) Organization of Thought - Whitehead; p. 20-22
(27) ibid; p. 41,a; 48
(28) Function of Reason - Whitehead; p. 34

Despite this inclusion of technical education in his educational schemes, Whitehead lays strong stress on the qualities of mind which may be expected to result from mathematical training in a liberal education - the power of clearly grasping ideas, and relating them to particular circumstances; and the power of logical or deductive reasoning. For the latter purpose, he emphasizes the contribution of geometry.* The more general outcome from the liberal tradition as it has maintained its place over the ages, has already been outlined to good purpose, above, as Whitehead sees it.

It is not surprising that a writer of Whitehead's profundity should consider that these qualities in the individual of tremendous importance - a viewpoint shared most sincerely by the Greek philosophers under discussion. Like Aristotle, he would most certainly not regard a general or liberal education to be synonymous with a literary education; nevertheless "apart from detail and apart from system, a philosophical outlook is the very foundation of thought and life. The sort of ideas, we attend to, and the sort of ideas which we push into the negligible background, govern our hopes, our fears, our control of behaviour. This is why the assemblage of philosophical ideas is more than a specialist study. It moulds our type of civilization." (29)

In the field of leisure, Whitehead says that normal recreation should be change of activity - as games afford by their disconnected nature. Nevertheless, their excess leaves us empty and is unrewarding; and so it is art and literature which should afford the best in recreation and play a part second only in importance to sleep or food in life. Intellectual enjoyment may be either that of relaxation or of creation. The notable feature here is his emphasis that the latter is the outcome of successful effort and requires help for its initiation. The need which he would feel for training in the use of leisure is evident, as a result. (30)

(29) Modes of Thought - Whitehead; p. 87 ls. 17 - 26
(30) Organization of Thought - Whitehead; p. 53 - 55
* ibid; pp. 93, 97, 21

Dewey regards education as "the process of forming fundamental dispositions, intellectual and emotional towards nature and fellowmen". (31) Thus it is a mode of practice either intelligent or else accidental and routine. When and if, this process is to be intelligent, it rests on the discovery of "intellectual instrumentalities" of the learner to be developed and directed by the educator. (32)

We have already quoted Dewey's opinion that learning out-of-school proceeds successfully and swiftly by virtue of being a response to a personal need and also woven into the fabric of the individual's experience by the inter-relations which exist between it and other elements of knowledge or interest. Consequently, it is not surprising to find that Dewey discredits the effectiveness and the evaluation of any learning which is in isolation or 'compartmented' either from other knowledge, or from the attendant attitudes, tastes and abilities which are being acquired. He agrees that it is true if a human being is learning anything at all, it will be a specific skill or body of facts. The educational issue is however what other things in the way of tastes, desires, aversions, abilities, disabilities etc. are being learned with the specific skill. (33)

The material of Chapter One has shown that Dewey's conception of the learning process is of one operating essentially in a social context and for a social purpose. Thus, without deprecating the fruits of past scholarship and experience, he regards as "laughable" the idea that an adequate education of any kind may be obtained from a prescribed and miscellaneous assortment of a hundred great books - more or less. In his eyes, the exponents of this curriculum, far from presenting the finest and timeless in human thought are ignoring and denying the principle of experimental inquiry and first hand observation in the growth and imparting

(31) Democracy and Education - Dewey; p. 383,c
(32) The Sources of a Science of Education - Dewey; p. 28,a
(33) The Sources of a Science of Education - Dewey; p. 65,a

of knowledge. They are reverting" to the medeaeval view of dependence upon the final authority of what others have found out". (34)

Dewey owes a complete reversal in the traditional relationship of knowledge and action to the change in the method of knowing brought about by the scientific revolution, begun in the sixteenth and seventeenth centuries. "Science advances by adopting the instruments and doings of directed practice, and the knowledge thus gained becomes a means to the development of arts which bring nature still further into actual and potential service of human purposes and valuation." (35) Thus he feels that there is a genuine possibility of creation and extension of culture and of a humanistic and liberal outlook in "intimate connection with the practical activities of life". Moreover, it is only when so developed that culture as it is customarily conceived can be vital and meaningful to many people. (36)

Speaking of the 'conflict' between the operation of practical aims and the liberal, cultural, humanistic ideal, as it occurs in the construction and evaluation of educational offerings, Dewey attests that while the former may be narrow and confining to mental outlook, the same may be said of the latter. On the other hand, either may be utilized to broaden insight and understanding. (37)

His conclusions from this premise are worthy of reference in detail: "I do not see how anyone can doubt that so long as the humanistic is set off as something by itself, apart from the interests and activities in which the mass of men and women must perforce engage, it will grow thinner and, more and more, merely reminiscent of what Santayana calls 'the genteel tradition'. It is equally true that, as long as the actual

(34) Challenge to Liberal Thought from Problems of Man - Dewey; p. 149 b&c
(35) Quest for Certainty - Dewey; p. 85,b
(36) The Way Out of Educational Confusion - Dewey; p. 25,a
(37) The Way Out of Educational Confusion - Dewey; p. 21,a

occupations of men, with the exception of a few professions labelled 'learned', are not affected by the larger outlook and the fuller background presented by the ideal for which the liberal in education stands, they will be narrow and hard, tending not merely to the 'utilitarian' in its restricted sense but even toward the brutish and inhuman". (38)

Thus we may say that both the modern writers under consideration hold an educational ideal with respect to a curriculum which may be termed democratic. That is, they would wish all learners to be exposed to the liberal and humane in human thought. Moreover, they would regard education in practical skills as both valuable and essential to the continuance of the civilization.

III. COMPONENTS OF THE CURRICULA: It is now time to consider in further detail the arrangements which our authors would make of the learnings which they would present to youth. Whitehead having accepted by implication the modern views on the psychology of learning, writes at length on the arrangement of formal knowledge for presentation to the young and points to current deficiencies in this field.

The first commandment to be obeyed in any educational system is, he says, "Do not teach too many subjects". The second is "What you teach, teach thoroughly". (39) Instead, he complains, "we offer children algebra, from which nothing follows, geometry from which nothing follows, science, from which nothing follows, history from which nothing follows, a couple of languages never mastered and lastly.....Literature represented by the plays of Shakespeare with short philological notes and short analyses of plot and character, to be in substance committed to memory". (40)

The result of reaching small portions of too large a number of subjects is that it results in "the passive reception of disconnected ideas"

(38) ibid; p. 27,b
(39) Organization of Thought - Whitehead; p. 3,b
(40) Organization of Thought - Whitehead; p. 13,b - 14,a

lacking in illumination and vitality. (41) Neither, he says, should facts and propositions be taught in isolation, because inter-related truths are utilized 'en bloc' and with the benefit of reiteration and added relevancy from the multiple ties. (42) Moreover, he says, "the apprehension of general ideas, intellectual habits of mind and pleasurable interest in mental achievement can be evoked by no form of words." (43)

Whitehead trades three steps in the acquisition of any body of information - a period of discovery, a period of systematization and a period of generalization or deduction. (44) Each portion of subject matter will be acquired according to this plan but the child will vary in the time of entering upon any of the periods; and all subjects will not be at the same stage simultaneously. In the first place one train of thought will not suit all groups of children; he suspects that artisan children will want something more concrete" and in a sense swifter than the integration presented by history and algebra". (45)

Thus the theoretical treatment of any subject is seen to rest on a firm foundation of experience. Moreover, he considers that they should always find important application within the pupils' curriculum. He claims "This doctrine..... contains within itself the problem of keeping knowledge alive, of preventing it from being inert, which is the central problem of all education." (46)

Finally he states there should develop, as the last acquirement of the educated mind, the most austere of mental qualities. This he terms the sense of style, an aesthetic sense, which constitutes the "ultimate morality of mind". (47)

(41) ibid; p. 5
(42) ibid; p. 8
(43) ibid; p. 13,a
(44) The Aims of Education; - Whitehead; p.20 - 28
(45) Organization of Thought - Whitehead; p.19
(46) ibid; p. 10 ls. 24-30
(47) ibid; p. 24 - 25,a

It is to be noticed that Whitehead agrees with Dewey on the need for exploration and accumulation of facts following the lines of native interest and curiosity. He stresses more explicitly than does Dewey the need for systematization and classification of this material to succeed the initial questing or period of romance and discovery. Furthermore, his purpose, in the final analysis, is that information so arranged shall permit enlightened and mature inferences to be made.

Dewey's viewpoint on the arrangement of subject matter in a curriculum has both been misused and abused by protagonists for and against child-centered education, more commonly referred to as progressive education. His writings on the subject have been too copious to cite at a proportionate length here. Basically, he considers that since the child is already familiar with some part of any subject which the teacher is attempting to teach; the most satisfactory course will build from the foundation of this material already known. The normal and progressive (perhaps we should read 'developmental' for this term of his) procedure, appears to him, to be the one which enlarges the child's experience by methods which resemble as closely as possible the ways that the child has acquired his beginning experience. (48)

Dewey further claims that the subjects represented by names in a school curriculum, imply that learning is immediately at hand, and is so constituted that it can be divided up like a fixed quantity into suitable and separate doses. The assumption is continued, however tacitly, that these doses of history or biology or algebra, etc. - "unified through its isolation" - which are created, result as a natural eventuality in the act of studying. (49) Dewey strongly opposes this reasoning and is of the opinion that in conventional education the pupils learn "the

(48) Schools of Tomorrow - Dewey; p. 72,a
(49) The Way Out of Educational Confusion - Dewey; p. 13,b

symbol instead of the fact". This he deplores, stating, "what the pupil really needs is not exact information..... but how to find out for himself." (50)

The actual advance of knowledge and the arts, occurs not by mere extension of facts and principles, but by inter-penetrating cross references. Every subject borrows techniques and achievements from others. (51) We may support Dewey's contention by observation of the history of any physical and social science known today. When this inter-dependency is recognized, and employed, as a teaching method, the central question acts as a magnet to draw material from the various fields together. Thus in place of formal internal relations to be discovered, increase in learning consists in noting the bearing and function of the material required. Dewey says of it, "The latter has at least the advantage of being the kind followed in study and learning outside of the school walls". (52)

Dewey regards geography and history as "the two great school resources for bringing about the enlargement of the significance of a direct personal experience". They are "two phases of the same living whole, since the life of man in association goes on in nature..... as the material and medium of development". (53)

His choice of material and method of presentation rests on his belief that "dominating intellectual pre-occupation with the future is the way by which efficiency in dealing with the present is attained". What is more, upon the most hopeful outlook, study and planning are more important in meaning, the enrichment of content which they add to present activity, than is the increase of external control they effect". (54)

Plato, with the acknowledgement that education is first given through

(50) Schools of Tomorrow - Dewey; p. 16,a
(51) The Way out of Educational Confusion - Dewey; p. 15,a - 16,a
(52) The Way out of Educational Confusion - Dewey; p. 33,a
(53) Democracy and Education - Dewey; p. 255,c
(54) Human Nature and Conduct - Dewey; p. 267,b

Apollo and the Muses, adds that if this training is omitted "there will be no use talking about true education". (55) From the ages of three to six, he recommends sports, at which time "self-will" will be eliminated from the child's nature. After the age of six, separation of the sexes and learning is to begin. The training is to be horsemanship and arms, for the boys and such girls as are suited. (56)

Plato envisages three years spent from the age of ten in letters. The following three years are to be given to training at the lyre. He feels they ought to be occupied with learning until they are able to read and write, but the acquisition of perfect beauty and speed is not to be forced beyond the allotted number of years, if nature has not stimulated them to that achievement. (57)

He does specify, however, several other features to be part of the subject-matter of his proposed curriculum:

a. for pleasure and advantage and an exact knowledge of the countryside, the young are to hunt with dogs and participate in other similar sports. (58)

b. temperance, obedience, to commanders, and physical self-control is likewise seen as a requisite to be imparted through music and gymnastic. (59)

c. the telling of tales, due to the lack of discernment of youth between allegorical and literal, shall be models of virtuous thought. This condition is to be maintained by censorship of the writers of fiction. (60)

d. In the duties of the legislator he stresses responsibility for mathematical training for the citizens".... no single instrument has such mighty power as regards domestic economy and politics and in the arts, as the study of arithmetic". In addition, he believes that it stirs up the slow learner

(55) Laws - Plato; Bk. II, 654
(56) Republic - Plato; Bk. VII, 794,a
(57) Laws - Plato; Bk. VII, 810,a
(58) Laws - Plato; Bk. VI, 763,a
(59) Republic - Plato; Bk. III, 389,b also Bk. IV, 425,b
(60) ibid; 377, a&b; 378,b

to be retentive and shrewd. (61)

e. Likewise, he mentions number calculation, geometry and astronomy in the Republic. (62) They are to be a preparation for the dialectic training which is to culminate the educative offering. He feels the former should be presented in childhood, "....not however, under any notion of forcing them.....knowledge which is acquired under compulsion has no hold on the mind." (63)

He then would have those who are selected from the class of twenty-year olds to be promoted to higher honours, proceed to have the sciences which they learned without any order in their early education brought together. In this period of systematization, they "....will be able to see the natural relationship of them to one another and to true being". (64) This too, he would use as the final criterion of dialectical talent. (65)

"Those who have most of this comprehension and who are most steadfast in their learning..... when they have arrived at the age of thirty, will have to be chosen and elevated to higher honour; and you will have to prove them by the help of dialectic, in order to learn who of them is able to give up the use of sight and the other senses, and in company with truth to attain absolute being". (66) His notion of the honour to be accorded the able scholar is notable. Nevertheless, we find that the honour in itself constitutes further study and service. Five years of study, followed by military or other service, to retest their suitability for the high station and responsibility which will fall on them, is to come next. The latter for a period of fifteen years, or until the age of fifty. "....then let those who survive and have distinguished themselves in every action of their lives....

(61) Laws - Plato;Bk. V, 747,b
(62) Rep. - Plato;Bk. VII, 522,a; 532,b
(63) ibid; Bk. VII, 536,b also Laws; Bk. VII 818,a,b
(64) Republic - Plato; Bk. VII 537,c
(65) loc. cit.
(66) ibid; 537,d

come at last to their consummation: - the time has now arrived at which they must raise the eye of the soul to the universal light which lightens all things, and behold the absolute good; for that this is the pattern according to which they are to order the State and the lives of individuals, and the remainder of their own lives also; making philosophy their chief pursuit, but when their turn comes, toiling also at politics and ruling for the public good". (67) Plato leaves no doubt that he regards their lot as perfectly happy and the proper fulfillment of man's abilities and goals.

Aristotle recognizes four subjects as comprising the education of his time - and accepts their merits. Reading and writing - as having the highest utility for practical life; gymnastics - as tending to produce courage; music; drawing. (68) He continues that "all teaching starts from something already known, as we have explained in the Analytics, for it proceeds either by induction or by syllogism". (69) This is a view which Whitehead and Dewey have expressed in other words. Because, as has been previously stated, science is a constituent of Wisdom in Aristotle's definition of this, it is evident that he would add to schooling his views on science. He defines science as a habit or formed faculty of demonstration. We are said to have scientific knowledge when the principles of that knowledge are accepted and known to us in a particular way. (70) It is a mode of judging universal and necessary truths whose demonstration rests on principles fundamental in each science. (71) "Wisdom is the union of scientific knowledge and reason about objects of the noblest nature". (72)

Burnet comments on what science training would be recommended by Aristotle. He states that we can only speculate although certain legitimate

(67) ibid; 539, 540
(68) Politics - Arist; Bk. VIII, 3-Bekker 1337,b
(69) Nic. Ethics - Arist; VI, 383
(70) Nic. Ethics - Arist; Bk. VI, ch. 3 sec.4
(71) ibid; VI, ch. 6 sec.1
(72) ibid; Bk. VI, ch. 7 sec.7

inferences may be drawn. "In the first place, as has been said, his interest lay rather in the direction of biology and history than in that of mathematics..... we may be sure that physics and the theory of the heavens held a high place in the scheme, for these are the subjects of Aristotle's most carefully written lectures. We may also be sure that the whole was intended to lead up to what we call metaphysics." (73) In survey it should be mentioned that the Lacedaemonian state (from which Aristotle drew much of his frame of reference)(74), and the states of Crete stood almost alone in 'sorting' the elements of the population, and forbade those who discharged the nobler social functions to meddle with those less noble. Their example was held to be sound by both Plato and Aristotle. (Aristotle's analysis of the constitutions of Crete, Sparta, and Carthage are warped in his efforts at comparison for purposes of his debate). (75)

The practice of these states was to leave labour of the manual sort to the subject races which stamped this type of work as unfit for free men. The prevailing scorn of trade and industry is one of the most unhealthy features in the theoretical communities of Plato and Aristotle. We find a body of enlightened and educated citizenry living a parasitic existence upon the productive capacities of the non-citizen and subject peoples whose rights were wholly incommensurate with their important contribution to the maintenance of the society. One of the most profound implications on the life of individuals within such a society would be the impediments which would be put in the way of technological progress, when the most brilliant minds were prohibited from lending their skill; and the class which were entrusted to this field were a group without educational opportunity, social

(73) Aristotle on Education - Burnet;p. 135,b - 136,a
(74) Politics - Arist.;II,6; Bekker 1265
(75) Politics - Arist.;trans. B. Jowett, Introd. xliii

prestige, or means of influencing public opinion.

Aristotle and Plato feared habituation of the mind, as this would likely arise in response to a routine situation. The useful arts involved living at the disposal of another, or in accord with the dictates of the occupation and hence were regarded by them as unfitting the mind for free and highest pursuits suitable to freemen. Specialization even within the field of abstract knowledge was also discouraged by them. Slavery of mind might be incurred not only in the study of useful information but in liberal studies, if pursued in an over-exact way. While the body of workers was taken to include in its upper ranks, sculptors, painters, architects, musicians and singers, (76), the stigma of usefulness might be escaped if the work was done, not for payment but out of patriotism.

Leisure for maximal rational and philosophical activity is, for Aristotle, the true end of all learning provided by the community. The habit of intellectual enquiry is a necessary quality for the occupation of leisure. (77) Throughout, his principle is that education must follow the order of physical development by training of the body, temperament and reason successively. Each part is to be trained with a view to the element which emerges next. (78)

Plato asserts strongly the superiority of the philosophical life in his dissertation in the Republic. The education, which Plato proposes, to fit a citizen for a proper place within his conception of the ideal social group, is based upon his belief that education is not to put knowledge into the soul, but to bring out the best things latent in it, by directing it to the contemplation of right objects; and thus cause imitation and likeness to

(76) Politics - Aristotle; Bk. VIII, 2-Bekker 1337,b
(77) ibid; Bk. VIII,3-Bekker 1337,b
(78) ibid; Bk. VII, 15-Bekker 1334,b

those objects. (79) (They must in consequence surround the young, and the opposite kind of objects must be barred by legislation and censorship).

Towards this end, he would train the body as a fit medium in which the soul might operate, by gymnastics and such music as would inspire noble thoughts and sentiments. Literature, free from degrading references or allusions, would serve to direct aspirations and encourage emulation. A knowledge of elements of science and figures would serve as an introduction to unchanging truths and immutable laws. Finally some knowledge of fine arts should be included, not from the standpoint of attaining excellence of execution, but for the discovery of the truths and principles which they may give to a well-developed mind. (80)

Dewey and Whitehead have proposed curricula and content not for an ideal state nor for an end existing beyond the concept and scope of the social group as this at present exists. We must, of course, recognize the meagre extent of knowledge contemporary to the Greek writers, and the lack of classification within the terms of definite fields or subjects as they now exist. The essential difference is evident, however, Dewey and Whitehead propose education for all, to the limit of their capacities, and following whatever trend these may take in individual cases. Neither would deprecate the technical training, nor elevate the unmodified liberal education. By their lights, today education requires elements of both.

(79) Republic - Plato; Bk. III, 401
(80) Republic - Plato; Bk. VII sec. 521 ff; especially §536

CHAPTER THREE

SOCIAL INFLUENCES IN THE EDUCATIVE PROCESS

At the outset, it was assumed that there were three component factors in the educative process - the learner to whom the learnings are presented and whose abilities must be actively engaged; the cultural heritage and the collective material and mental experience of the race; and thirdly the community which serves as the milieu for the inter - action of the other two. The mechanism by which the individual learns has been presented according to the views of the four authors under discussion. Their concepts of curriculum - planning and constituents have likewise been presented.

From time to time, throughout the two previous chapters, the influence of the community has been mentioned as a factor in some aspect of the learning process, or in what is to be learned. The social influences may stem from contact with a single individual such as the mother, teacher, minister, etc. It may likewise stem from the status of the individual within the social structure. The exigencies of earning one's own living at an early age, of belonging to a religious or racial minority are but a few examples of profound influences on the learning, both formal and otherwise, of the child within these or other categories. Nowhere is this clearer than in the educational provisions of the ideal states visualized by Plato and Aristotle.

It is obviously fallacious to postulate the learner as a sort of 'disembodied spirit', an impersonal receiving set for the ideas and facts which it is desired it shall absorb. Each of the four writers has explicitly referred to the efficacy and essential nature of the training in the 'nursery'. By the time the pupil enters the educational scheme of any of the writers concerned, he has already a working knowledge of his 'mother tongue' - the

means of communication* with the adult world, and his fellows which in all likelihood, he will employ for a lifetime. In the previous chapter, we quoted Dewey's view that social objects came after the development of language and because of it, so that education and schooling became a necessity. (1) Whitehead also goes even further in this matter. He says that it is the triumph of human ingenuity, surpassing even the complexities of modern technology. By the intervention of physiological processes, it is a natural symbol "for the deep experience of organic existence". "Let it be admitted.... that language is not the essence of thought. But this conclusion must be carefully limited. Apart from language, the retention of thought, the easy recall of thought, the inter-weaving of thought into higher complexity, the communication of thought are all gravely limited." (2)

In addition, it is well to remember that training in the home has resulted, before formal schooling is begun, in control of the child's physical functions; and either by its presence or absence, home guidance will have produced far-reaching dispositions. His temperament and outlook are in a large measure determined. Our learner is already a product of, or a compromise between, his native endowments and the people and situations among which they developed.

In this connection we might call to mind Dewey's statement in Chapter One that uniformity of habits within a social group such as lead to tradition, mores, and convention are not so much a like response occasioned by the nature of a situation, as the result of making that response under pre-existent and definite social conditions.

The legacy of learning, cultural heritage, or whatever other term we wish to apply to the knowledge of the race, is no freer than the learner

* Used in the sense of making one's thoughts articulate and intelligible to others, and conversely hearing and giving the same meaning as the speaker to the ideas of others.

(1) Human Nature and Conduct - Dewey; p. 79 and 80
(2) Modes of Thought - Whitehead; p. 49, 50

of the inter-penetration of forces in the social group in which it is imparted. It is useless to return to pre-literate societies when each was in its simplest form for a clue to what should be the relation of learning and society. From the time when man paused in his labours sufficiently long to ask the irresolvable 'why' questions of his neighbour and himself, men have never failed to be intrigued with the purely mental inquiry. Those thinkers who could advance a step beyond what had been previously ascertained or stated, were venerated. Pre-occupation in this field, which demanded so much of the human mind became equally exalted.

This is intended only as a general statement; and it is necessary to know something of the temper or attitude of their time, and then briefly sketch the conceptions of the structure of society of Aristotle and Plato.

The realization of a threefold harmony in the individual was called by the Greeks 'worth', or as it is often translated in English, 'virtue'. Greek life was dominated with a single and aesthetic idea. This idea was that of proportion ('logos') which is the derivative for the name of the science of Manifested Reason in many languages; logic being the English. To the Greek, Reason always meant proportion; and a rational life meant a life of which all parts stood in just relation to one another. This proportion was three-fold - between the different parts of the human being, between the individual and his fellows in his community and between the human as such and the overruling divine. As they sought to produce this harmony, they discovered that the human being comes into the world with his powers undeveloped and, in addition, disorderly and unharmonious in relation. The potentialities required development and this required a process of purgation of man's emotional nature, essential if education were to be successful in its ultimate purpose. The means employed were mainly music and the kindred arts, which were generally believed to draw

off the exciting causes of disturbing passion and leave the soul in possession of itself.

The Greeks conceived three conditions as necessary to the realization of their ideal - first a noble nature, second persistent exercise of training in right action, and third careful instruction. Without any one of the three, the ideal could not be achieved. It is important that we bear in mind that Greek education was intended only for the few in whom these three conditions could exist conjointly. Upon all others, slaves, foreigners, and all persons spending their lives in pursuit of wealth or any private ends, it was considered that educational effort was wasted. The free citizen not only would acknowledge no other duties than those required for the exercise of full citizenship, but looked down upon those who sought occupation in any other sphere. The Greeks divided mankind into two distinct classes a governing and a governed. The former required education in order that it might govern itself and the other class in accordance with reason and justice; the other class required only such education as would enable it to obey.

Educational provision differed from one Greek state to another, and notably from that demanded or recommended by philosophers and writers on the subject. Plato wrote his Republic with a deep impression of the evils and dangers of the social order in which he lived. He was not alone in observing the demoralization of Athenian men and women, the consequent weakening and dissolution of the social bonds with the accompanying defective education of children, and the disorganization of the state through an acceptance of an individualism which placed power in the hands of ignorance and rapacity rather than of wisdom and worth. The Republic is, accordingly, a scheme for removing these evils and eliminating the attendant dangers. It proposed nothing less that the complete transformation

of society, but lacked any intimation as to how the populace for whom he proposed it could be persuaded to submit.

The human faculties of intellect or reason, spirit or courage, and desire or appetite are regarded, in the State, as characteristics of corresponding classes. First there is the intelligent class or sages, second there is the spirited class or soldiers, and third there is the covetous class or those devoted to trade and other money-making pursuits. Plato assumes that this fundamental division actually exists at the time of his writing, so that the only difficulty in completing his proposals is with regard to the designation of children to their proper class. This necessity is completely met by his educational system. At the outset the State abolishes the family as a unit and assumes its functions.

The system of education to which the children of the State are subjected is, to a large extent, modelled after that of Sparta, particularly with regard to its rigour and exclusively political character. It accepts the Athenian tendency on the aesthetic side, including the time-honored division of education into Music and Gymnastics. Letters are accorded a position within Music. It demands that these two trainings shall be pursued towards the single end of developing the harmonious human being fitted to membership within a harmonious State. Greek thought demanded three things for a complete education as we have already seen; a noble nature, training through habit, and instruction. Plato would achieve the first by artificial selection of parents, the second he would secure through music and gymnastics and the third through philosophy. In these last two divisions, we have the root of the mediaeval <u>trivium</u> and <u>quadrivium</u>.

The children were to be accepted by the State immediately after birth, and their early care was designed to make them healthy and strong. The officers of the State would utilize the abundant opportunities for

observing and distinguishing between the noble and ignoble natures and thus to consign them to their proper class at an early age. The education of the lowest class after childhood the State leaves to take care of itself, persuaded that the appetite will always find the means for its own satisfaction. The nobler natures it will continue to direct.

His Laws represent a change of attitude and allegiance. Whereas in the Republic, Plato finds the moral sanctions, in the last resort, in the ideas of the pure intellect, trained in abstract studies; in the Laws he derives them from the content of popular consciousness, its gods, and ethical notions and traditions. He deserts the position of abolition of private property, and of the family and seeks to regulate them instead. He demands only a practical insight for the rulers, and his government is no longer an aristocracy of intellect but a compound of freemen and slaves representing worth and wealth, and will. He is of the opinion that he is deserting a lofty but unrealizable ideal in making concessions to human weakness. Because of its increased recognition of certain basic characteristics of human nature and relationship, however, it may seem to us to more nearly approach truth and correctness.

Plato, reared in the philosophical school which included Pythagoras, Parmenides, and Socrates, looked for truth in the supersensual region of mind, and thought he found it in ideas attainable by a process of dialectic within the individual consciousness. Thus his doctrine although having the intent to cement the bonds of society, tended in reality to withdraw men from society altogether, with an increase of the individualism which it purported to cure. Aristotle, while still in Plato's school, had turned away from this doctrine, and took every opportunity to combat it. (Nevertheless his criticism of the incomplete account of the method of implimenting its doctrines, which he levels against the Republic is applicable to his own treatment in the his Politics).

Before embarking upon a theory of the State, Aristotle had written the Constitutional Histories of over two hundred and fifty different states which form the background for his inductive judgments on this matter. He came to the conclusion, as we shall shortly prove, that the State is the highest social institution which secures the highest good and happiness of man. He concludes that since man's distinguishing faculty is reason, the State is the institution which secures the fullest exercise of man's reason. It is thus the supreme educational institution. It is difficult to study the manner in which it discharges this function, as it arranges the whole scheme of education but is also built up by the scheme. Aristotle makes numerous provisions as to location, number of citizens, property and the like. (3) Aristotle holds that the previously mentioned distinction between rulers and ruled is fundamental. He claims that it holds also in the relation of God and the universe, soul and body, etc. (4)

The mode of life of the ruling class will necessarily differ widely from that of the ruled. About the latter Aristotle has nothing to say. He hopes for little from that class beyond the possibility of its being held in contended subordination. (5) Furthermore he holds that the class ought to be made up of barbarians of different races, and not Greeks. (6) The ruling class, on the contrary, live to a large extent in public and on public funds. These are some of the chief features of Aristotle's ideal State, based on his views of man's political nature and the history of the past. Like all social ideals, it is a static condition. Its institutions are fixed once for all, and every effort made for their preservation. The ideal State, like every other, must educate with a view to its own institutions, since only in this way can they be preserved.

(3) Politics - Aristotle; Bk. VII, 12 & 13
(4) ibid; Bk. I ch. 5; Bekker 1254,a
(5) ibid; Bk. VII, 10;Bekker 1330,a
(6) ibid; ch. 6;Bekker 1255,a

We should bear in mind that Plato's treatment of education in the Republic is complete, systematic as it comes to us in the Politicus is for some reason a fragment. The description of education of the body belonging to the art of gymnastic is apparently given more or less completely. However, as to the education of the mind which is less emphatically declared to be the study of the whole process, we have not a single word as revealed by the Politicus as known to us.

Until we survey the broad and systematic qualifications, we must realize that these were significantly subordinated to other interests that those among the populace who failed. Right before their energies eloquently to liberal or "liberating" mental exercises. Since the importance of these studies was subsumed to philosophical as well as intellectual grounds, the fit was cast. Numerous activities were looked asserted for the pursuit of liberal or general education became the exclusive right of the leisured. Social selectiveness had to be more intensified. The student operated to reproduce itself and the implements of its social survival suffered the consequence and the use of the scientific method of observation and experimentation. A tremendous growth of technology arose from the application of scientific result and the scientific method. Nevertheless, the element of judgment and interest studies about these pursuits has remained a strong influence.

The earliest educational theories in America represented an effort to reinterpret the liberal traditions in education of the nineteenth, and it were successfully fitted toward the aims of the modern European civilization. Especially, the demands of the industrial development created vocational training for many of those employed. Curriculum studies over the past half century represent attempts to strike an equilibrium or compromise between these two aspects of education. The expanding frontier

and opportunities for initiative in America, has rendered technical education both acceptable and necessary in the eyes of many. It has also called in question the merits of traditional liberal education. Whitehead and Dewey both have had to take a position in the argument. Both aim to interpret the knowledge and life of the community to the learner, as we have seen. Whitehead still leans heavily towards the benefits to be gained from general education, it should also be clear. Dewey emphasizes the need for democracy in society, and in education for democratic living. He states, "....when we consider the close connection between science and industrial development on the one hand, and between literary and aesthetic cultivation and an aristocratic social organization on the other, we get light on the opposition between technical scientific studies and refining literary studies. We have before us the need of overcoming this separation in education if society is to be truly democratic." (7)

Whitehead is equally insistent that educational ideals should be broad enough to include within its scope not less than the entire population being educated. By this he means those in (English) secondary schools who are preparing for professional careers and those in the junior technical and continuation schools, who in later life will form the skilled artisans class. "These two sets comprise the educational strength of the nation." (8)

This preliminary survey will, we hope, have served to sketch the general approach of the writers. Detailed treatment is most satisfactory, we believe, if the material is divided into two sections:

I. EDUCATIVE INFLUENCES - or the effect of the social setting in which the learner learns, and CONTROL OF EDUCATION BY THE COMMUNITY (or state) in the form of legal enactment and other regulations.

(7) Democracy and Education - Dewey; p. 338,b
(8) Organization of Thought - Whitehead; p. 2 & 3

II. THE SOCIAL PURPOSES OF EDUCATION. This will be an outgrowth of the writers' views of the relation of the individual to the community in which he lives. The foregoing analysis will in part make this clear. We will be interested only in the duties, responsibilities and station in life, for which the authors wish their children to be prepared.

I. EDUCATIVE INFLUENCES AND CONTROLS OF THE COMMUNITY: Dewey is noted above the other three writers for his minute and exhaustive treatment of pervasive social influences. His copious writings have dealt with this above any other phase of educational philosophy. The first point he stresses is the dependency of the infant for all his needs on those adults around him; "Each person is born an infant, and every infant is subject from the first breath he draws and the first cry he utters to the attentions and demands of others". (9) "The inchoate and scattered impulses of an infant do not coordinate into serviceable powers except through social dependencies and companionships. His impulses are merely starting points for assimilation of the knowledge and skill of the more matured beings upon whom he depends.....They are agencies for the transfer of existing social power into personal ability." (10)

In addressing the College of Physicians he forecasts a time "when our entire traditional psychology will be looked upon as extraordinarily one-sided in its exclusive concern for the actions and reactions of human beings with their physical surroundings" and the corresponding neglect of "inter-personal relationships". While a so-called social psychology has been created with its own literature, we are still far from having reached the point when the difference in animal and human psychology is characterized by the

(9) Human Nature and Conduct - Dewey; p. 58,a
(10) ibid; p. 94,b

transforming effect exercised upon the latter by intercourse and association with other persons and groups of them. He claims that ".....apart from unconditioned reflexes, like the knee jerk, it may be questioned whether there is a single human activity or experience which is not profoundly affected by the social and cultural environment." (11) We know from other references that to language he would add emotional reactions, custom and sense of values to these affects.

He goes on to comment that this process may have unfortunate implications - deleterious both to the young and to the prospects of social progress. The plasticity of the young presents a temptation to those having greater experience to exert their power, with the consequent "insolent coercions, the insinuating briberies, the pedagogical solemnities" which dull the freshness and curiosity of youth, and which employs the establishment of habit as a guarantee for the maintenance of the "hedges of customs". (12)

We have seen the place of habit in Dewey's psychology. This however represents a second field of social influence, he feels. They are essentially methods of using and incorporating the environment in which the latter exerts a definite influence. (13) "Since habits involve the support of environing conditions, a society or some specific group of fellow-men is always accessory before and after the fact". (14) He categorically states that it is not an ethical ought that conduct should be social, it is social whether bad or good. (15)

Things which a man experience come to him clothed with meaning which originates in customs and traditions is the essence of the third aspect of social influence. "Spears, urns, baskets, snares may have originated

(11) Lecture to the College of Physicians, St. Louis, 1937, - Dewey; quoted in Intelligence in the Modern World; John Dewey's Philosophy, edited Ratner; p. 825,b
(12) Human Nature and Conduct - Dewey; p. 64,b
(13) ibid; p. 15,a
(14) ibid; p. 16,b
(15) ibid; p. 17,a

accidentally in some consummatory sequence of natural events. But only repetition..... accounts for their becoming institutionalized as tools, and this concert of action depended upon the use of memoranda and communication. To make another aware of the possibility of a use or objective relationship is to perpetuate what is otherwise an incident as an agency". (16) The importance of this to Dewey lies not only in the perpetuation of collectively gained material progress, but in the imperative nature of this advance to the development of man's control over his own affairs, which is bound up with his material environment and the extent to which he is able to direct natural energies to use. (17) On the other hand, not only will tools and technique come to man so clothed but social factors play a part in generating personal traits, as he has already outlined. In consequence we attribute distinctive characteristics to rich and poor, members of different races, parties, sets and the like. (18) Dewey might be cautioned that such generalizations are prone to frequent and glaring exceptions. He likely would retort that the fact that the initial generality is made shows our awareness that personal traits are in general functions of their social situation.

Dewey then has presented as social influences - the dependency of childhood, exposure to the connotations and patterns of the adult community and the tendency of social situations to elicit a common reaction from those it surrounds.

It is, in fact, partly to this last factor that Dewey owes the failure (in his opinion) of the present educational system to meet present and imminent needs: The elementary school has been devoted to the promotion

(16) Experience and Nature - Dewey; p. 187,a
(17) Democracy and Education - Dewey; p. 267,b
(18) Human Nature and Conduct - Dewey; p. 20,a

of literacy; while higher education "was almost equally controlled by concern for symbols, namely advanced mathematics and foreign languages". (19) We might add that it is a frequent assertion from other writers as well that the secondary school, too, is too preoccupied with a programme which is of most worth and pleasure to the slim minority who will proceed to higher education. The motivation among abler students was distinctly that the world outside the school - to get on in the world. The schools' appeals to personal ambition has been "almost boundless". (20) He states later in this discussion that in compensation for the curtailment of activity outside the school, there has been an expansion in courses, enrolment, etc. The breathless rapidity of changes outside the school have had little organization or unified tendency and the curriculum has reflected this situation. More serious is his contention that "A society that is largely held together by the aim of many individuals to get on as individuals, is not really held together at all." (21)

In the field of actual formal regulation and legal prescription, Dewey shows most clearly his adherence to a democratic philosophy. In the Preface to Democracy and Education, he writes, "The philosophy stated in this book connects the growth of democracy with the development of the experimental method in the sciences, evolutionary ideas in the biological sciences and the industrial reorganization, and is concerned to point out the changes in subject matter and method of education indicated by these developments". This we have seen has led him to conceive of education as consisting in widening spheres of related information and the development

19) Education and the Social Order - Dewey; p. 683-684 in John Dewey's Phil. - ed. Ratner
20) ibid; p. 685,c
21) ibid; pp. 687, 688

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(19) Education and the Social Order - Dewey; p. 683-684 in John Dewey's Phil. - ed. Ratner
(20) ibid; p. 685,c
(21) ibid; pp. 687, 688

of dispositions which lead to effective relations with one's fellows. Thus "Education if it is really education should send them (the young) forth with some unified sense of the kind of world in which they live, the directions in which it is moving and the part they have to play in it". (22) In addition he has stated,"We can retain and transmit our heritage only by constant remaking of our environment". (23) The consequence is fairly evident, he has recognized the need for some social orientation for the school and drawn this from the needs of the young people, within it. But he would make it the function of the school itself, not of state or social group to rule on the conduct of education. We may tabulate the obligations which he lays on the school, as a result:-

a) "The first office of the social organ we call the school is to provide a simplified environment.....It establishes a progressive order, using factors just acquired as a means of gaining insight into what is more complicated". (24)

b) Second he feels it is the business of the school "to eliminate so far as it is possible, the unworthy features of the existing environment from influence upon mental habitudes". (25)

c) The third obligation is "..... to balance the various elements in the environment and to see to it that each individual gets an opportunity to escape from the limitations of the social group in which he was born". (26)

d) By virtue of the conclusions from studies of mental life which prove the fundamental worth of native tendencies to explore, to manipulate tools and materials, to construct, to give expression to joyous emotion, etc., Dewey makes it incumbent upon the educator to engage the pupil in exercises

(22) The Need for Orientation from the Problems of Man; Dewey; p. 90,b
(23) Human Nature and Conduct - Dewey; p. 21,b
(24) Democracy and Education - Dewey; p. 24
(25) loc. cit.
(26) loc. cit.

which call forth these reactions in the school programme. "Without something of the kind, it is not possible to secure that knowledge-getting be an outgrowth of activities having their own end, instead of a school task". (27) He adds that the educational significance of active occupations consists in the fact that they may typify social situations. (28)

Whitehead says, "What education has to impart is an intimate sense for the power of ideas, for the beauty of ideas, and for the structure of ideas, together with a particular body of knowledge which has peculiar reference to the life of the being possessing it". (29) With this as his aim, he proceeds in several of his essays to expound in considerable detail the role and method of the teacher if this is to be attained. We may however postpone discussion of this phase of the social influence in the educative process to the next chapter, recognizing that it is to the teacher and his imagination and insight that Whitehead would credit the greatest achievement of all the influences operating to fit the child for the community around him.

The influence of the society is to be inferred from two pertinent statements. He claims, "Any serious fundamental change in the intellectual outlook of human society must necessarily be followed by an educational revolution..... the law is inexorable that education to be living and effective must be directed to informing the pupils with those ideas and to creating for them those capacities which will enable them to appreciate the current thought of their epoch". (30) This is particularly important in the light of his belief that in the final analysis you may push or direct the process, within narrow limits but all education is self-direction. (31)

(27) ibid; p. 228,b - 229,a
(28) ibid; p. 234,b
(29) Organization of Thought - Whitehead; p. 23,b
(30) Organization of Thought - Whitehead; p. 69 & 70
(31) The Rhythmic Claims of Freedom and Discipline from The Aims of Education Whitehead; p. 61,a

Moreover, he is constantly referring to the shortness of time in which deliberate education may influence the process. (32)

Not only will such a change of intellectual outlook necessarily result in educational adjustment but "by sociological law" it will also be true that every social revolution will be followed by educational reconstruction, he believes. (33)

We notice that the modern writers are more concerned with the all-pervasive spirit which will dominate and guide the teachers, the administrators and the curriculum-planners, than with specific enactments. It seems likely that they would be dubious of the efficacy of the latter in achieving the ends which they set out to achieve. The social influence, as a result, will center around the teacher and his outlook, both of which will be of tremendous import to Dewey and Whitehead.

Burnet sums up a feature which should have become increasingly clear in the course of this study:

> "Neither Plato nor Aristotle would ever have dreamt of discussing education as a science by itself and it is a mistake to suppose that we can get an independent treatise on the subject by the simple process of detaching a portion from a larger whole. For it is by no means an accident that the theory of education is treated by Plato and Aristotle as a part of Politics. It is true, he says that the good of a single individual is the same as the good of the whole state, but it is no less true that it is only in the state that we can realize that good in all its completeness." (34)

As a preliminary to a consideration of social influences and enactments, we will do well to summarize Aristotle' s conception of the relation of the city state (we might use 'community' in so far as the numbers concerned would approximate what we usually mean by this latter term) to its member.

(32) ibid; p. 75,a
(33) Organization of Thought - Whitehead; p. 2,a
(34) Aristotle on Education - Burnet; p. 131,a

Every state is a community, he says, and the latter always exists for some good as mankind always acts in order to obtain ends which they think are good. The outgrowth of a virtually self-sufficient community from smaller aggregations originates in response to the bare needs of life and persists for the sake of permitting the good life. (35)

Moreover, "since the whole is of necessity prior to the part", the state is by nature prior to the individual and the family in its importance. (36) Man is by nature a political animal. (we might render this as 'social') However, Aristotle is convinced that all are not adapted to participating in the same measure. "For that some should rule and others be ruled is a thing, not only necessary but expedient; from the hour of their birth, some are marked out for subjection, others for rule". (37)

He continues that the state is a plurality which can only be united and made into a community or group having common purposes by education. (38) He disagrees with Plato however, that this can be achieved through a community of property, wives and children. He states that the error of Socrates in this matter may be attributed "to the false notion of unity from which he starts". (39) He is convinced that common loyalties do not result in this way, as everyone thinks chiefly of his personal and individual interests and only of the common interest when he is himself individually concerned. (40)

Aristotle says that the function of Politics is to prescribe "which of the sciences a state needs and which each man shall study and up to what point". (41) In the Politics, he avers that no one will doubt that the attention of the legislator should be primarily directed to educating

(35) Politics - Aristotle; Bk. I, 1 & 2 (Bekker 1252, a&b)
(36) ibid; Bk. I, ch.2 - Bekker 1253,a
(37) ibid; loc. cit. & ch.4 - Bekker 1254,a
(38) ibid; Bk. II,5 - Bekker 1263,b
(39) loc. cit.
(40) ibid; II, 3 - Bekker 1261,b
(41) Nic. Ethics - Aristotle; Bk. I, ch.1, sec. 5 & 6

youth as neglect of this is harmful to the state. He continues that the citizen should be moulded to suit the form of government under which he lives. He adds that the education which will make a good citizen in a democracy is not that which will make a good citizen of another state for instance an oligarchy. (42)

Aristotle has of course distinguished between citizens and slaves and other metics. Like Plato he is concerned with the education of the citizens i.e. those who share in the administration of justice and in offices (where the government is not a tyranny.) (43)

Politics are thus chiefly concerned with producing a character in its citizens which is good, and enables them to do fine actions. This leads naturally to the position that the child cannot know true happiness as "his age prevents him from performing such acts". (44) Thus the first point to be drawn is that Aristotle regards the child as imperfect and only to arrive at his full stature by the influences of instruction.

The second point is that as he looks to legal enactment to ensure every feature of his educational programme, we find little in the field of social influences which is not encompassed by legal provisions and deliberate control. Among these influences are those which arise from legal dicta on marriages, limitations of population to maintain a definite standard of living, and the care of infants and youngsters. (45)

Aristotle's injunctions to the legislator are based on the underlying premise that the state exists not for the sake of wealth or security or society, but for the sake of a good life. (46) He assumes that goods may be partitioned into three classes, viz. external goods, goods of the body

(42) Politics - Aristotle; Bk. VIII, 1 - Bekker 1337,a also Bk. III,4 - Bekker 1276,b-1277,a
(43) ibid; Bk. III ch.1 - Bekker 1275,a
(44) ibid; Bk. VIII, Bekker 1334,a; also Burnet;p. 33,b
(45) ibid; Bk. VII, ch. 15,16 & 17 also Bk. VIII ch. 1&2
(46) ibid; Bk. III,9 - Bekker 1280,a

and goods of the soul; and that the happy man must have all three. (47)

Since the State as a whole has a single end, he reasons that the education of all citizens must be one and the same, under state regulation and public supervision. (48)

Now, he regards reason and mind (the highest manifestation of the soul as we have seen from his analysis) as the purpose to which growth serves. "So that the birth and moral discipline of the citizens ought to be ordered with a view to them (49) He continues that since reason and understanding come with increased age, training of the body, of the emotions and of the soul must proceed in that order. They must however each be conducted for the sake of the phase which is to follow next. (50)

"All these points the statesman should keep in view when he frames his laws; he should consider the parts of the soul and their functions..... he should also remember the diversities of human lives and actions. For men must engage in business and go to war, but leisure and peace (for individuals and states respectively) are better; they must do what is necessary and useful, but what is honourable is better. In such principles children and persons of every age which requires education should be trained". (51).

We have already mentioned that Aristotle's state would delimit the age and other factors in marriages, and regulate the care of children - before and after birth. Education is to be divided into two periods; from seven years to puberty, and onwards to the age of twenty-one. (52) Even before the beginning of the formal education, there are certain legal obligations;-No demand for study or labour is to be made before the age of five, but

(47) ibid; Bk. VII,1 - Bekker 1323,a
(48) ibid; Bk. VIII, 1&2 - Bekker 1337,a
(49) ibid; Bk. VII, 15 - Bekker 1334,b
(50) loc. cit.
(51) ibid; Bk. VII, 14 - Bekker 1333,b
(52) ibid; Bk. VII, 17 - Bekker 1336,b

exercise by means of amusements is to be attained. Above all else, the directors of education are to be careful what tales or stories the children hear (as they will live at home to the age of seven) and ensure that there is nothing mean or low whether in picture or story in their environment. Moreover, they are to see to it that the amusements of children shall be for the most part, imitations of those occupations which they must later pursue in earnest. (53) (It seems difficult to imagine exactly what Aristotle would encompass here except by reference to the duties of household management and the spectator appreciation of art and music with which his citizens were to be later familiar).

It is not necessary to repeat here the subjects and attitudes which the legislator seeks to impart in the two periods of education beyond the age of seven. All the indication which Aristotle gives of this has already been presented in connection with the course of study. The significant point is that they are to be uniform, and completely prescribed by, and in the interests of the community.

It has already been stated that Plato's theory of education is designed to fit within the framework of his ideal state - the Republic. For this first of utopias he laid down various proposals educational, biological, economic and religious. It is not always clear how far these proposals apply to other classes than the guardians. We have of course some guide from his statement that, "He who in any way shares in the illiberality of the retail trades may be indicted.....for dishonouring his race.....He who engages in retail trade must be either a metic or a stranger". (54)

The social influences on the learner arise mainly from the legal enactments as we have seen to be true in the case of Aristotle. Legislation

(53) loc. cit.
(54) Laws - Plato; Bk. IX, 919,b-920,a

and the guardians. This evidently would be the paramount influence exercised on the young.

In the field of legal enactment the first education is to be that which ensures soundness of body. (57) The second feature is mentioned in connection with the training in gymnastics, here Plato states that the children will attend whether or not the parents so desire, and that girls will follow as far as possible upon the same programme. (This is in the Laws and despite that the fact that Plato no longer plans to abolish the family as an institution.)(58) By law no one is to offend against public and consecrated models in art, poetry or literature. (59) Finally we might add that after the Platonic state had distinguished the classes into which the children were to belong, their future activities and existence were prescribed in the manner discussed under the second chapter of this study.

The contrast which the foregoing study has evinced in the statement and content of the social influences on the educative process, is clearly a function of two radically differing concepts of the structure of society, and the status of the individuals in it. The contrast is so sharp that no elaboration can really do more than restate it.

II. SOCIAL PURPOSES IN EDUCATION: Much of what Dewey says here has been anticipated by his demands on the school and the social influences which he considers as operating in the life for which the child is to be prepared.

He states that the "exercises of practical life are designed to teach the child to be independent, to supply his own wants, and to perform the actions of daily life with skill and grace. (60) With his emphasis on the school as a miniature and simplified community training through

(57) ibid; Bk. VII, 804,b - 805,b
(58) c.f. Introduction to thesis
(59) Laws - Plato; Bk. VII, 801,b
(60) Schools of Tomorrow - Dewey; p. 145,b

experience, this is clearly to be a part of the social purpose of the school.

The educator is to furnish the environment which stimulates responses and directs the learner's course. "In the last analysis, all the educator can do is modify the stimulus so the response will, as surely as is possible, result in the formation of desirable intellectual and emotional dispositions". (61) The dispositions to be thus fostered by the school, he mentions elsewhere: ".....executive competency.....sociability.....aesthetic taste.....trained intelligent method.....sensitiveness to the rights and claims to others consciousness". (62)

He finds "the ultimate buttress of the soundness of all but the simplest ideas", consists not in anything found in consciousness itself or within the organism but in the "cumulative objective appliances and arts of the community". (63) We must recognize that in this statement, Dewey is expressing himself in terms which may be misunderstood. He feels that if the Greek concept of knowledge as contemplation, rather than as a productive art, is accepted as valid by modern philosophy, "the only course is relative disparagement of all forms of production". (64) As a result by his reliance instead on the method of knowing as represented by science, he falls back on a fundamentally materialistic interpretation of our heritage to posterity. It consists, for him, in transmitting "unimpaired and with some increment of meaning, the environment that makes it possible to maintain the habits of decent and refined life". (65)

He is primarily concerned with education as being for a democratic society, and as he views the separation of science and industrial development from aesthetic cultivation existing in equally close connection with an aristocratic social organization, he is impressed with the need of overcoming

(61) Democracy and Education - Dewey; p. 212,b
(62) ibid; p. 285 - 286
(63) Experience and Nature - Dewey; p. 347,b
(64) Experience and Nature - Dewey; p. 357,c
(65) Human Nature and Conduct - Dewey; p. 21,a

it, if society is to be truly democratic. (66)

Dewey continues: "The school must have some social orientation. Let it be admitted that this necessity is implicit in the nature of education... in the personality of the teacher, in the life of the school, in the relation of pupils to pupils, and pupils to teacher, in the administration, organization and arrangements, in the very architecture of the building - as well as in the subject matter taught". The choice for the teaching profession in this aspect of the social purpose of education is between an orientation which looks to the past, or one which looks to the future. We know that for him, he is committed irrevocably towards the latter. (67)

Whitehead says, "If education is not useful, what is it?.....It is useful, because understanding is useful". (68) We should guard against interpreting this statement in strictly utilitarian terms, however, rather it should be related to his claim that "In the conditions of modern life, the rule is absolute, the race which does not value trained intelligence is doomed". (69)

In consequence, he phrases his purposes for education for life in terms quite different from those of Dewey. It will be necessary to quote at some length from The Function of Reason. "The conduct of human affairs is entirely dominated by our recognition of foresight determining purpose, and purpose issuing in conduct". (70) Thus he sees, "The higher forms of life are actively engaged in modifying their environment. In the case of mankind this active attack on the environment is the most prominent fact in his existence....the explanation of this active attack is a three-fold urge 1) to live 2) to live well, 3) to live better.... the primary function of Reason is the direction of the attack on the environment". This conclusion

(66) Democracy and Education - Dewey; p. 338,b
(67) The Teacher and his World from The Problems of Man - Dewey; p. 80
(68) Organization of Thought - Whitehead; p. 6
(69) ibid; p. 28
(70) p.9

amounts to the thesis that Reason is a factor in experience which "directs and criticizes the urge toward the attainment of an end realized in imagination but not in fact". (71)

This leads him to state that "The essence of education is that it be religious.....A religious education is an education which inculcates duty and reverence. Duty arises from our potential control over the course of events. Where attainable knowledge could have changed the issue, ignorance has the guilt of vice. And to the foundation of reverence is this preception, that the present holds within itself the complete sum of existence". (72)

"Stripped of its theological trappings, the essential idea remains that work should be transfused with intellectual and moral vision and thereby turned into a joy, triumphing over its weariness and pain". (73)

The inference for everyday life is plain - "....there can be no prospect of industrial peace so long as masters and man in the mass, conceive themselves as engaged in a soulless operation of extracting money from the public. Enlarged views of the work performed, and the communal service thereby rendered can be the only basis on which to found sympathetic cooperation. (74)

In the educative process this leads him to believe that alike for masters and for men, technological education adequate for the practical needs of the nation "....must be conceived in a liberal spirit as a real intellectual enlightenment in regard to principles applied and services rendered. In such education, geometry and poetry, are as essential as turning lathes. (75)

When we turn to consider the social purposes of education in Aristotle's opinion, it constitutes in substance a summary of the foregoing analysis of the relation of the citizen to his State or community:- The state

(71) ibid; p. 5
(72) Organization of Thought - Whitehead; p. 28
(73) ibid; p. 31
(74) ibid; p. 33
(75) loc. cit.

exists for the sake of the good life. All education as a branch of Politics is for the purpose of making the individual a good citizen of that state. Education seeks to develop certain characters in the citizens, that will make them good and able to do fine actions. In his words, "Nature herself..... requires that we should be able, not only to work well, but to use leisure well;.....the first principle of all action is leisure.....Leisure of itself gives pleasure and happiness and enjoyment of life.....It is clear then that there are branches of learning and education which we must study with a view to the enjoyment of leisure, and these are to be valued for their own sake". (76) Knowledge which is useful in business or other such pursuit is necessary for the sake of something else, which it makes possible. (77) Evidently then the social purposes of education lie in the fact that only as a component of a social structure can Aristotle conceive of their eventualizing in the highest life for the soul - contemplation of the divine as manifested in the universe.

In the writings of Plato, too, we find that the social purposes of education result from the inter-relation which he conceives as subsisting between the two. An educational end is never an independent conception, it is always secondary or derived from its designer's views about life and man's place and part in life. (78) We may represent Plato's theory of this relation by two quotations: "The intention was, that in the case of the citizens generally, we should put each individual man to the use for which nature designed him, and that every man would do his own business". (79)

> "We are speaking of education in this sense....of education in virtue from youth upwards which makes a man eagerly pursue the ideal perfection of citizenship, and teaches him how rightly to rule and how to obey. This is the only training which upon our view would be characterized as education, that other sort

(76) Politics - Aristotle; Bk. VIII,3 - Bekker 1337,b - 1338,a
(77) loc. cit.
(78) c.f. The Theory of Education in Plato's Republic - Adamson; p.2
(79) Republic - Plato; Bk. IV, 423,b

> of training which aims at the acquisition of wealth or bodily strength or mere cleverness apart from intelligence and justice is mean and illiberal and not worthy to be called education at all". (80)

We may conclude this treatment of the social purposes of education by citing a quotation by each of the modern writers on the classical view. Dewey says,

> "Aristotle was permanently right in assuming the inferiority and subordination of mere skill in performance and mere accumulation of external products to understanding sympathy of appreciation and the free play of ideas. If there was an error, it lay in assuming the necessary separation of the two; in supposing that there is a natural divorce between efficiency in producing commodities and rendering service, and self-directive thought."
>
> . . . . . .
>
> "In short, ability to transcend the Greek philosophy of life and education is not secured by a mere shifting of the theoretical symbols meaning free, rational and worthy. It is not secured by a change of sentiment regarding the dignity of labour.....Important as these theoretical and emotional changes are, their importance consists in their being turned to account in the development of a truly democratic society, a society in which all share in useful service and all enjoy a worthy leisure". (81)

Whitehead, in writing on Technical Education and its Relation to Science and Literature, indicates the strength and weakness of the Platonic conception from his standpoint:- Essentially a liberal education is education for thought and aesthetic appreciation. "The action which it contemplates is command". It is aristocratic and implies leisure. It has rendered imperishable services to European civilization, Whitehead believes. Furthermore, it is a very good Education for certain people. (82)

But it is equally apparent, he says that the expression of the human spirit is not confined to literature, a discursive knowledge about the best of which,generally characterizes the essence of a liberal education.

(80) Laws - Plato; Bk. I, 643,b-644,a
(81) Democracy and Education - Dewey; p. 299, & 300
(82) Organization of Thought - Whitehead; p. 34,6 & 35,a

The field of acquirement is large, and the passive reception of ideas of others inadequate. (83) His conclusion at once sums up his view of the living purposes of education and constitutes his appraisal of the Greeks'.

> "My point is, that no course of study can claim any position of ideal completeness.....The insistence in the Platonic culture on disinterested intellectual appreciation is a psychological error. Action and our implication in the transition of events amid the inevitable bond of cause to effect are fundamental. An education which strives to divorce intellectual or aesthetic life from these fundamental facts carries with it the decadence of civilization. Essentially culture should be for action, and its effect should be to divest labour from the associations of aimless toil". (84)

(83) ibid; p. 36, b&c
(84) ibid; p. 37,b

CHAPTER FOUR

THE TEACHER IN THE EDUCATIVE PROCESS

The development of this study has thus far almost entirely lacked explicit mention of the role of the teacher in the educative process as each of the authors sees it. It is true of course, that much that has been said with regard to how the child learns, what he is to learn and the external influences which he undergoes carry certain implications as to the function and methods of the teacher.

The position of the teacher is a good deal more specific in the systems of Plato and Aristotle, than in Dewey's and Whitehead's experience. We have only to refer to the previous chapter to note that the reliance on education having definite content and the purpose of producing a harmonious human being for membership in a harmonious social group, laid heavy responsibility on those who were to be the instructors. To a great extent their purposes and the greater part of the content is regulated by law. Their role was fixed and capable of definition in terms of the objects of the community: They were to produce citizens who possessed certain knowledge and prepared to serve the State. Whitehead is prepared to rigorously define the attitude and approach of the teacher in order that his method may take into consideration both "the living minds" of children, and also meet the needs of present day conditions. His teaching must retain withal, the recognition of values which are not material and insights into that heritage of aspirations and ideas which cannot be defined within the limits of curriculum components, yet which any society seeks to transmit to its youth.

As we have seen, the nurses in the Republic and the mothers in the Laws are the first teachers for Plato. The emphasis in early education is less concerned with a growing store of meanings or experience, so

important to Dewey, and more with fostering of good bodily health and development. (1) These early instructors will acquaint them with what is fine in music and story and early proceed to initiate those habits which will later serve as a foundation for physical and mental disciplines and activities. (2) At all levels of instruction, Plato has emphasized the superior value of example to dogmatic instruction. (3)

Early adolescence, as we know, was to be devoted to achieving skill in those activities useful in war - riding, feats of arms, hunting, and the like. (4) The type of instruction as given by the teachers of these skills is virtually self-evident.

Plato gives little account of the mechanics of the training in letters and music which is to follow. Two points might be restated, however, in this connection. The first is Plato's contention that compulsion is a futile means of attaining lasting achievement. "Again therefore calculation and geometry and all other elements of instruction.....should be presented to the mind of childhood, not however under any notion of forcing them..... knowledge which is acquired under compulsion has no hold on the mind". (5)

The second has also already been mentioned, and is his view that while the proficiency accepted as requisite in these fields should be the goal of instruction, the period of instruction should not be prolonged until such excellence is finally gained,in the cases where the learner's abilities or native endowment have not made this possible in the allotted space of time. (6)

The aforementioned training is for Plato, however, intended as a preliminary to the training in dialectic and absolute knowledge which is to

(1) Laws - Plato; Bk. VII; 795,a
(2) ibid; Bk. VII, 800,a also ibid; BK. II, 653
(3) ibid; Bk. V, 729,a also Bk. XII, 808,b - 809,a
(4) Republic - Plato; Bk. VII, 794,a also Laws; Bk. VI, 763,a
(5) Republic - Plato; Bk. VII, 536,b
(6) Laws - Plato; Bk. VII, 810,a

commence after manhood is reached. In their twenties, the youths are to begin those studies which will fit them as guardians and which are to be undertaken under the existing magistrates, who are the only repositories of this knowledge. (7) Once more the method of teaching is not clear. However, if for the purposes of deciding on the teaching method, we may be guided by Plato's theory that absolute knowledge exists in a latent or potential state in the individual, it will be evinced by the appropriate questions which will render the student cognizant of its content and implications. In this case, the function of the teacher would be the perfection and statement of these questions. This would presumably resemble the Socratic method of considering metaphysical problems, as this is recorded in the Dialogues. It would appear to this writer that the process would possess obvious limitations as a result of its dependence on the skill in evoking the correct responses, and the scope of the material which is suitable for this method of approach.

In Aristotle's writing, we are likewise in doubt over the actual position of the teacher in some phases. This is due not to the obscurity of references, but to the absence of any account whatsoever of the constituents of his third phase of education - i.e. the education of the mind. This lack has been previously alluded to in this study. Like Plato, he distinguishes three levels of motivation in the individual - physical, emotional and mental or rational. (8) The training and consequently the teaching of the first two of these phases evidently would resemble Plato's provisions. He has stated his acceptance of the four subjects to be taught, which conformed to Athenian tradition, and records disagreement with features of Plato's proposed training in music (in its narrow sense) only. (9)

(7) Republic - Plato; Bk. VII 537,c & 540,a
(8) Politics - Aristotle; Bk. VII, 15 - Bekker 1334,b
(9) ibid; Bk. VIII, 7 - Bekker 1334,a

We have seen however that he was less concerned than Plato with the production of highest thought through solitary contemplation of the inate truths of existence as the approach to the eternal and divine, but held instead a conviction that this end result was to have a different origin. He sought a contemplation of the external world which would reveal by a process of induction and syllogistic logic the course of the universe and the manifestation of the Divine. (10) Aristotle was primarily a teacher, Plato a mystic; whereas Plato would have his teachers as finished products of an educational theory, whose emulation would reproduce them, Aristotle was in fact himself an explorer and enlarger of the knowledge of the world. The teleological trends of his investigations as an observer of the material world are not without significance and relevancy to his position of the would-be teacher.

Dewey's positions is somewhat difficult to ascertain because of the prevalent tendency to identify his practical recommendations with the practices of the more notable (or perhaps merely conspicuous) of the progressive schools. It is well to draw attention to a recent criticism of the latter levelled by Dewey despite the fact that his philosophy and pedagogy provide a systematic theoretical foundation for the newer educational practices. He feels that progressive education has rejected the old without giving us a clear and positive conception of the new. This applies to such basic concepts as "organization", "authority", "experience", "freedom", etc. The rejection of the old presents a problem which is likely to be unsolved when no coherent philosophy is elaborated and applied to teaching procedures to take its place. (11)

Dewey has founded his educational philosophy on the interacting claims of activity, psychology and society. The whole tenor of Democracy

(10) Metaphysics - Aristotle; Bk. I, 981,b; also Nic.Ethics; Bk.VI, ch.3 sec.4; ch. 6 sec.1; ch. 7 sec. 7

(11) Experience and Education - Dewey, 1938. quoted in Education Faces the Future - Barkson. N.Y. Harper and Brothers, 1943; p. 155

and Education bears out this contention. From his psychological analysis of the learning process, he finds activity to be imperiously demanded - an activity which explores, relates, discards, and interprets. (12) We have seen that he has spoken of "that social organ which we call the school", (13) and in countless other allusions has indicated that the child must be prepared before he can participate in the complex of the existing social group. By contrast, the society continues by this acquisition by the child of his intellectual and moral heritage. A quotation from Democracy and Education will illustrate: "Society not only continues to exist by transmission.... but it may fairly be said to exist in transmission.....Men live in a community in virtue of the things which they have in common.....What they must have in common in order to form a community or society are aims, beliefs, aspirations, knowledge - a common understanding. Such things cannot be passed physically from one to another.....The communication which insures participation in a common understanding is one which secures similar emotional and intellectual dispositions - like ways of responding to expectations and requirements". (14)

The position of the teacher appears on first examination anomalous. We may suppose that he will have undergone the training which Dewey proposes. Emphasis will have been laid on his native capacities, his learning will have been presented not in discrete and unitary fashion, but integrated around a genuine center of interest by inherent relationship, and he will have lived in a school community which gave insight into cooperation and service by exemplifying functional democratic procedure. Is the teacher in his professional capacity to become a pale shadow of the community which he represents, as the following generation is led to grasp its meanings and knowledge? Such an eventuality is

(12) Education and The Social Order - quoted in Intelligence in the Modern World; p. 689
(13) Democracy and Education - Dewey; p. 24,a
(14) Democracy and Education - Dewey; p. 5,b

inconsistent in the extreme, we believe, with Dewey's actual conception of the teacher in the educative process. Let us examine certain of his statements to derive from them his injunctions and guidance to the teacher.

He states that in dealing with the young, the fact of association itself is of immediate importance. ".....it is easy to ignore in our contact with them the effect of our acts upon their disposition, or to subordinate that educative effect to some external and tangible result". (15) But this is less likely in treating the association with children than with adults - "Since our chief business with them is to enable them to share in a common life we cannot help considering whether or not we are forming the powers which will secure this ability". (16)

He is at once aware of the dangers attendant on the commencement of formal education. He says, "Sharing in actual pursuit, whether directly or vicariously in play, is at least personal and vital.....Formal instruction, on the contrary, easily becomes remote and dead". (17) Thus he fears the creation of an undesirable split between "experience gained in more direct associations and what is acquired in school". (18)

He is firmly convinced that it is through the influences of the life around the child that the powers of observation, recollection, and imagination are set in motion, thereby forming "the texture of disposition". In consequence, he is certain that "What conscious, deliberate teaching can do is at most to free the capacities thus formed for fuller exercise, to purge them of some of their grossness, and to furnish objects which make their activity more productive of meaning". (19)

The formation of mental and moral character, which all education serves to do, consists, he believes, in the "selection and coordination of

(15) Democracy and Education - Dewey; p. 8,b
(16) loc. cit.
(17) ibid; p. 9,d
(18) ibid; p. 11,b
(19) ibid; p. 20,b

native activities so they may utilize the subject matter of the social environment". Moreover, the formation occurs <u>through</u> the native capacities by a process of reconstruction, and reorganization. (20)

He believes that teachers would find their task less of a strain if school conditions looked on learning in the "sense of discovery and not in that of storing away what others pour into them;" still more important in the pupil-teacher relation is his contention that "....no thought, no idea, can possibly be conveyed as an idea from one person to another". (21) It is a fact, and may either stimulate or smother the child's effort at thought culminating in the realization of the idea behind the fact given. Thus Dewey says "We can and do supply ready-made ideas by the thousand; we do not usually take much pains to see that the one learning engages in significant situations where his own activities generate, support and clinch ideas -- that is, perceived meanings or connections." He then goes on to emphasize that this does not mean that the teacher is to stand off and look on; "The alternative to furnishing ready-made subject matter and listening to the accuracy with which it is reproduced is not quiescence, but participation, sharing, in an activity." (22)

As a result, he sees five essentials in the teaching method - ".... first that the pupil have a genuine situation of experience.....; secondly that a genuine problem develop within this situation as a stimulus to thought; third that he possess the information and make the observations needed to deal with it; fourth that suggested solutions occur to him which he shall be responsible for developing in an orderly way; fifth that he have opportunity and occasion to test his ideas by application, to make their meaning clear

(20) <u>ibid</u>; p. 84,a
(21) <u>ibid</u>; p. 187,c - 188,a
(22) <u>loc. cit</u>.

and to discover for himself their validity. (23)

Thus the teacher's position must be regarded as two-fold. In the first instance he will serve as an interpreter and transmitter of the collective experience with which the child as a learner is to become familiar, in accord with the tenets to be observed as these have been stated above.

Still more vital, however, he must represent, by his active participation as an adult member in the community, the continuous trend toward refashioning it, in the light of the ideals which are held for its progressive betterment. He will, as he serves as guide to the pupils' development, indicate by his own ability to suspend decision for the discovery of further facts, to look at a problem from all angles, embody the concept of a forward-looking, evolving process. This idea is clearly at variance with classical writers, who conceive of society as a more or less static and established order of things to be perpetuated by inculcating an acceptance of its permanent values in the oncoming generations.

Whitehead states his main idea in the Aims of Education and other essays as being that students are alive, and the purpose of education is to stimulate and guide their self-development. (24) He adds a corollary to this - ".....teachers also should be alive with living thoughts". (25) He desires to teach children a few broad ideas and have these thrown into every combination possible, as we know. (26) Thus he believes that "The child should make them his own, and should understand their application here and now in the circumstances of his actual life". (27) His reasoning is based

(23) ibid; p. 192,b
(24) The Aims of Education - Whitehead; preface. (Note: previously reference to those of the essays which appeared in the Organization of Thought was made from the latter book. However as all relative material to this discussion is in the former book and not complete in the latter, references are more satisfactory if made uniformly from it.)
(25) loc. cit.
(26) ibid; p.3
(27) loc. cit.

on his belief that whatever be the detail with which the teacher seeks to cram a child's head, the chance of his meeting that exact detail in after life is infinitely small. Consequently the important thing to leave with him, and which will remain with him, will be "how to apply principles to immediate circumstances". (28)

He regards the pupil's mind as above all "a growing organism", not a box to be ruthlessly packed with alien ideas; on the other hand the ordered acquirement of knowledge is the "natural food for a developing intelligence". (29) "Accordingly, it should be the aim of an ideally constructed education that the discipline should be the voluntary issue of free choice, and that the freedom should gain an enrichment of possibility as the issue of discipline". (30)

He emphasizes throughout that the actual application of this theory will depend on the character of the particular group of students and the qualities of the teacher. (This leads him to oppose external examination and standards as an end of the process.) (31) He is convinced that the golden rule for education is that "whatever interest attaches to your subject-matter must be evoked here and now; whatever powers you are strengthening in the pupil, must be exercised here and now; whatever possibilities of mental life your teaching should impart, must be exhibited here and now". (32) The pupils must be made to feel that they are learning <u>something</u>, not that they are, to use his words, "executing intellectual minuets". (33) He feels that the teachers forget that they are subordinate characters in the elements of education of the grown man and that with the proper initiation of the process, the pupils will in later life learn for themselves. (34)

(28) <u>ibid</u>; p. 42
(29) <u>ibid</u>; p. 47,b
(30) <u>loc. cit.</u>
(31) <u>ibid</u>; p. 14,a also p. 7,c & 21,b
(32) <u>ibid</u>; p. 9,a
(33) <u>ibid</u>; p. 15,a
(34) <u>ibid</u>; p. 53

A second cardinal point in his views of the teaching method is his statement, that in contrast to the conception of the pupil's progress as being uniform and steady, undifferentiated by a change of type of pace, that life in reality comprises daily periods and longer periods of change of activity. In addition "there are subtler periods of mental growth which have a rhythm and character of their own." (35) Whereas the older education concentrated on an unrhythmic presentation of a single undifferentiated subject, modern education with its insistence on a general preliminary education and its tolerance of the analysis of knowledge into distinct subjects, is presenting an equally unrhythmic collection of "distracting scraps". (36) He sees the necessity in life and in school of undertaking imposed tasks, cheerfully and believes that the conditions to gain this can be satisfied "if the tasks correspond to the natural cravings of the pupil at his stage of progress, if they keep his powers at full stretch, and if they attain an obviously sensible result, and if reasonable freedom is allowed in their execution". (37) He states that the child will not absorb the fruits of the task unless his powers of apprehension are kept fresh by romance. (discovery) The real point is to discover "that exact balance between freedom and discipline which will give the greatest rate of progress over the things to be known". (38)

In speaking of the function of the university he points out still another feature of the teaching process. The university is to promote "the imaginative consideration of the various general principles underlying that career" in which its students are gaining a technical apprenticeship. (39) The principle, we believe, is a natural extension of his plea for pupils of all ages to receive illumination of the principles which give their studies meaning. (40)

(35) ibid; p. 27
(36) ibid; p. 33
(37) ibid; p. 55,a

At all stages, we may say, that he wishes his teachers to be
›search›rs, alive and imaginative, in "intellectual sympathy" with the
›ung, active minds which are plastic and have the world before them. (41)
Education is discipline for the adventure of life". He comments that
›owledge does not keep better than fish. "Somehow or other it must come
› the students, as it were just drawn out of the sea and with the freshness
' its immediate importance". (42)

Clearly the modern writers have laid stress on the teaching method,
›ich is not found in the classical writers' treatment. The cardinal distinction
›, however, their concept of educational methods as dealing with the child
›d his capacities as they exist at the moment, and by imparting procedures of
›iscovery and generalization to provide him with the ability to continue and
›apt these, in the conditions in later life as he encounters them. It is a
›ntrast between teaching for a fixed as opposed to a dynamic view of society.
› the classical writers the content was fundamental, to the modern writers it
› the method of transmitting this material which is the prime consideration.
›e end product in both cases is a citizen capable of undertaking communal
›sponsibility and service.

41) ibid; p. 147,a
42) loc. cit.

SUMMARY AND COMPARISONS.

We have set out to examine and trace the common threads in
e theories of the educative process, as seen by Plato, Aristotle, Dewey
.d Whitehead. The authors' entire works were examined and all the material
levant to the educative process was noted. Detailed study bore out the
ntative assumptions of a preliminary survey - the writers had all given
me explanation of how the child gains information from the world around
m and comes to learn about it; they spoke of what constituted the body
knowledge which the child must necessarily acquire, and finally they in-
lcated the relation of the educative process to the social group. As none
the material was rendered extraneous by the procedure, the chapter division
as formulated to separate these three aspects:

. THE LEARNER IN THE EDUCATIVE PROCESS

I. THE CURRICULUM IN THE EDUCATIVE PROCESS

II. THE SOCIAL INFLUENCES IN THE EDUCATIVE PROCESS

t was evident as the study proceeded that the learning process was inseparably
elated to the teaching which accompanied it, (except in the case of casual or
nconscious assimilation of information). To make this relation more apparent,
owever, the role of the teacher was presented and recapitulated in a fourth
hapter -

THE TEACHER IN THE EDUCATIVE PROCESS.

We have seen that Whitehead and Dewey have owed thought and
nowledge to information as sensibly perceived. Moreover they consider that
odily participation in the process of learning is indispensable. Aristotle
nd Plato regard the information so obtained as inferior to absolute knowledge.
ney regard the faculty of pure knowing as entering the individual from within.
.ato conceives the highest aspect of knowledge as the product of contemplation
absolutes or universals divorced from any perceptual experience whatever.

istotle seeks by an inductive process to arrive at universals through the strumentality of the universe. Whereas Plato and Aristotle wish to train e physical, emotional and rational aspects of the child in that order, and er a period from childhood to mature manhood, Dewey and Whitehead analyze e learning process as this occurs from the time of entering upon primary ucation to entering a career or vocation, at the conclusion of high school university, as the case may be, and would not separate these aspects.

Summarizing the views on the curriculum, the social influences ıd the role of the teacher with respect of the four writers, we may note ertain specific points in the writings of each.

Plato conceives the educative process as occurring through esenting the young with educators who exemplify in their knowledge and ıeir actions, the final purpose of knowledge. This entails strict super- sion and censorship of the environment of the young, and contact after ınhood is reached with the sages or sole possessors of dialectical and ıilosophical knowledge.

Secondly, he conceives that the state exhibits the qualities of ıe individual writ large, the good state will embody the necessary conditions ıd pre-requisites for the good life in its members. Moreover the state exists) permit this highest of goods - the good life or life of worth.

This leads him to devise a society in which those who are pursuing ıe good life are free from other and distracting occupations. It is also the ıstification for state regulation of family life, the training of the young om birth, and the provision that it shall be uniform and definite to attain s purpose.

Fourthly, the good and highest life entails a doctrine of the entification of its possessors with a life of service, as administrators of e state.

Finally this leads him to deprecate other pursuits and knowledge

is extraneous and inferior.

Five points stand out in Aristotle's treatment of the educative process. Aristotle believes that man is a political animal by virtue of the good which he can obtain by association. Man desires the good life and conceives of its possibility by this means.

Since the state exists, in consequence, for the attainment of this end and education is to fit man for his life within the state, education should be uniform and for the maintenance and preservation of the state and the values it represents.

Education is to teach what is necessary but is, at all costs, to avoid making the learner a creature of habit or "mechanical"; as this will interfere with the pursuit of the highest in knowledge.

Aristotle wishes to make all his citizens the possessors of this knowledge, but unlike Plato would not construct his society on the basis of stratification of the Greeks, but desires to draw the other classes from foreign (and he believes inferior) peoples.

Leisure for people, like peace in a state, is the ultimate goal as it permits preoccupation with the knowledge of most worth. Training is to be crowned by the ability to make full and proper use of leisure.

In reviewing Whitehead's views, we may follow the analysis of Henry W. Holmes who discerns four fundamentals in the former's educational vision. Although related, they provide useful themes by which to indicate the trends in his opinions. Holmes calls them The Living Process of Education, the Living Utility of Education, the Living Rhythm of Education and the Living Reality of Final Educational Ends. (1)

) Whitehead's Views on Education - Henry W. Holmes from The Philosophy of Alfred North Whitehead.

In the first, Whitehead asserts that Education ceases, and denies its essential purpose and nature when it forgets that children are living organisms in a world whose only valid meanings are achieved within the living present. For all pupils and in all subjects, Whitehead emphasizes the importance of dealing with a few broad ideas actively considered and constructively used. The well-informed man filled with inert ideas and scraps of information has no place as his educational product.

He regards education as a living process only inasmuch as it is useful in some aspect of personal growth and eventuates in specialized power, conscious of an inherent "style" and which is socially valuable. The individual is to have something he knows well and something he does well. His insistence on utility in education arises from the shortness of time for education and the immediate demands upon the individual upon its completion. Technical education he regards as tremendously important, but it must have infused in it insights into the art and science of living through broad understandings and liberalizing studies. (The difficulty here lies in the limitations of the students who are to participate in the programme he would offer to them, we might add).

The third aspect - the living rhythm in education-observes the periodic character of growth, and the rise and fall of energy in interest and power of attention. He desires that education shall recognize the imperativeness of a balance between the need for immediacy of active understanding and the need for grasp of external and unyielding essentials both of the organized thought to be mastered and the social demands to be met. Not only does this lead to his statement of the existence of definite stages in the acquisition of information, but to his views on the successive claims of freedom and discipline in this process.

The ultimate ends of education are for him living religion, living

esthetic enjoyment and a living courage which urges men toward new creative dventure. All education is in essence religious he believes, and is that hich inculcates duty and reverence. Duty arises from our potential control ver the course of events. Where attainable knowledge could have changed the ssue, he believes that ignorance has the guilt of vice. He founds the sense f reverence on the realization that the present holds within itself the omplete sum of existence.

Dewey emphasizes Whitehead's statement that philosophy can deal ily with things in some sense experienced, and indicates similarity of back- round and point of departure in their thinking. Nevertheless, nowhere in ewey do we find a statement comparable to what is in many ways the culmination Whitehead's views. "The ultimate motive power, alike in science, in orality and in religion, is the sense of value, the sense of importance. It akes the various forms of wonder, of curiosity, of reverence, or worship, tumultuous desire for merging personality in something beyond itself. This nse of value imposes on life incredible labours, and apart from it life nks back into the passivity of its lower types. (2)

Dewey is notably not a constructive metaphysician. He presents us th no systematic account of reality other than the account to be derived om the sciences and common sense, criticized and generalized by philosophic flection.

The basic notion of speculative thinking as opposed to naturalistic empirical thinking has a primary appeal for education by banishing the nception that science alone holds the answers to its problems and the tisfaction of its hopes.

Moreover, unless thinking beyond the bounds of science in the usual se of this term is pertinent to education, nothing religious can find a ce. What is shut off from human thinking is the possibility of any novel

The Aims of Education - Whitehead; p. 62 f.

sight into the nature of things. Speculative philosophy would lay before e soul the universal scope of things. It is some such argument as this at sees and states the import of Whitehead's general conception of adnture and adventuring in ideas as indicating unexplored potentialities in ucation.

Nonetheless, as was clearly evidenced by the commemoration and ibutes on the occasion of his seventieth birthday in 1929, there is a large d illustrious body of educators who are persuaded that in and through John wey the world has taken great steps forward, and who point to every child school as witness. They believe that he has shown how in scientific method y be found a way of philosophizing which puts common sense, science and ilosophy in a continuous and close relation.

His viewpoint and doctrine for education has been regarded, in mmary, as the outgrowth of four main principles which he preached as sential for contemporary education. (3) There is a danger of overmplification here. The claims of the principles listed are unquestioned. hers might wish to augment or expand the points mentioned. Our choice has wever the precedent of acceptance by an illustrious disciple and scholar Dewey.

First, he focused the attention of teachers on the nature and the eds of the child. He looked to the mechanism and demands of child growth ther than to any element in the subject matter for the center of the school's forts and activities.

Secondly, he conceived learning to be the outcome of experiencing. crease in skill and knowledge came as the result of a process of association. e child thus was involved in a process of organic assimilation which evented in his being a man rather than a child, by virtue of having gained

John Dewey's Influence in the Schools - Jesse H. Newlon from John Dewey, The Man and His Philosophy; p. 37 ff.