

**PSYCHOLOGY AND ART
OF EDUCATION**



MAHATMA GANDHI

“This is how that great teacher taught me.”

BAPU—MY MOTHER

Kumari Manu Gandhi

(By courtesy of
Sjt. Kanu Gandhi,
Rajkot)

PSYCHOLOGY AND ART OF EDUCATION

In Six Parts,—the last part containing a critical and constructive survey of the recent Educational Experiments and Plans in Free India. The book not only includes several chapters on Basic National Education, but is also inspired and sustained by the Principles and Ideals of that great educational scheme for human regeneration

BY

DR. T. V. SESHAGIRI RAO

With Foreword

By The Hon'ble Sri T. S. Avanashilingam Chettiar,
Minister of Education, Province of Madras
(1946-49)



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Dedicated
in
Deep Reverence
to
All Sincere Lovers
of
TRUTH AND NON-VIOLENCE
In All Lands and In All Ages

The only virtue I want to claim is truth and non-violence. I lay no claim to superhuman powers: I want none.

-
Mahatma Gandhi

FOREWORD

I am glad to write this short Foreword to Dr. T. V. Seshagiri Rao's book on ' Psychology and Art of Education '. His is an ambitious venture trying to cover the numerous aspects of the theory and practice of education in a single volume. That perhaps explains the brief treatment of many of the topics. A bibliography is given at the end of every chapter which, I am sure, will be helpful to students who want to pursue their studies in greater detail in any particular branch. As in every branch of knowledge, in education also there have been vast strides of progress. Education has been the subject of study and research from immemorial times. From time to time man has been trying to keep pace with the changing circumstances of the time. We are living at a time when revolutions are happening in almost every sphere of human activity. Science is advancing, society is changing, the nature of our needs are also changing. The common man is coming into his own and this revolution will have to be reflected in the education of our children also.

Time was and not very long ago when education was considered to be a necessity for only a few. But now with democratic ideals of society spreading all over the world it is necessary and essential that at least a minimum of education should be given to every child. Consequently as the author has said somewhere we are on the brink of a vast educational readaptation of life and a vast socialisation of instruction to meet the complexities of our new national life. This in its wake must imply the training of a large number of teachers. Training large numbers in efficiency and quality has its own difficulties. These problems have to be faced and solved in the best interests of the nation.

Coming to the methods of education, time was when the teacher who taught was the only person who was active in the school and the students were mere passive listeners. But today researches have proved that the child as well as man largely learns through experience and it is the duty of the teacher as well as the school to provide these experiences and guide the child to get knowledge out of the experiences so provided. The cry all over the world in all progressive

countries has been to activise the curricula so that the school can be made interesting and the children will learn with joy. The activity schools which are being organised all over the world in all advanced countries lay emphasis on the development in children of the qualities of self-control, free thinking and expression and the cultivation of good social relationship, by planning their work for learning by actual experience. This method implies giving a greater place in the school programme for creative work in craft, art and music and such other activities. If we are to train the child in freedom and strength we must adopt such methods on a nation-wide scale. This will mean that our teachers should first be trained on these lines.

With regard to the content of education, one of the most important aspects of education today will be the creation of a social sense and the training for citizenship. Democracy depends for its strength on the cultivation of this great quality in the people. Where this quality does not exist, democracy will inevitably fail. We in this country who have chosen to establish a fully democratic state, must bear in mind this great truth. Our educational system must assimilate this great idea and provide for this training, so that the youngsters of our nation can grow and live with a proper sense of individual freedom and collective responsibility. Those of us who are in charge of education today have indeed a great responsibility, for ours is the proud privilege of laying the foundations for a glorious future for this great country.

I hope that Dr. Seshagiri Rao's book will be useful to the students of education in focussing their thoughts on many of the important problems in education today.

Sri Ramakrishna Vidyalaya
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27-9-1949

T. S. Avanashilingam



The Hon'ble Sri T. S. Avanashilingam Chettiar

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Tending cotton plants.
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Vigour—Making soap.
Serenity and activity in spinning.
Carpentry—Craft work.
Discipline, Order, Rhythm.
The International Institute of Practical Psychology.
The Author.

DIAGRAMS

Lengthwise section of the Brain.
Sensory, Motor and Association areas of the Brain.
Sympathetic Nervous System.
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PREFACE

Our present-day complex civilization would be unworkable without men in key positions having a scientific knowledge of the world of human life and affairs. The most important part of this world is Man himself and his Mind. Man's mind is so marvellous that it would be a great satisfaction to understand it. Such an understanding is of special importance to Teachers whose mission is to assist the development and growth of the mind and personality of the young ones put in their charge.

A correct understanding of human nature is also necessary for the proper balancing in the present ill-educated world of the increasing mastery of the physical world. The world wars have shown that we do not know enough of Man as yet and that this insufficiency of knowledge about Man is to a large extent responsible for so much of bungling and devastation. The causes of war and likewise the causes of all unwanted things in human life like poverty, distrust and discontent, are ultimately in Man himself, *i.e.*, in his Mind. This is what justifies the growing demand for the teaching of the Science of Psychology not only for the youngsters in the Arts and Science Colleges of the Universities, but also for the Teachers under training for the great Art of Education. The Art of Education is throughout based on the general principles of the nature and development of the human mind. It is on account of this that we have appropriately fixed the title of this book intended for Teachers under training in particular, as PSYCHOLOGY AND ART OF EDUCATION.

At a particular stage of my career in the Educational Service in Southern India I had the opportunity of being in charge of the Junior Section of the Teachers under training in the Government Training College, Rajahmundry, and of

the Government Training School at Guntur in the Andhra University area. It was at that time that I sought to give the student-teachers a working knowledge of human nature on which to base their training in the Art of Education. It is this special experience of mine and also the experience of teaching General Psychology for the Intermediate and the B.A. students, together with my special study and research in Applied Psychology in the capacity of the Director of the Gandhiji Memorial International Institute of Practical Psychology and Mental Hygiene, that have enabled me to venture the writing and publishing of this book for the use of the B.T. and the B.Ed. students of the Indian Universities in their preparation for public examinations and for the practice of the great Art of Education.

With regard to the writing of the several chapters on Basic Education, I have specially to state that I am much obliged to the courtesy and good grace of Sjt. E. W. Arayanayakam and Srimati Asha Devi for facilities given to me to watch the working of their Nai Talim Basic School and Basic Training Centre at Sevagram—Wardha.

I take this opportunity to express my indebtedness also to the Hon'ble Sri T. S. Avanashilingam Chettiar, the Minister of Education of the Province of Madras, (1946-1949), for his kindness in taking the trouble and interest in perusing the manuscript and honouring my effort by writing the Foreword to this book. I am also thankful to him and to Principal Ellen Sarma and Dr. V. N. Sarma for permitting me to publish herein the pictures of their New Schools at work at Periyannayanpalayam and Mylapore.

It is also my privilege to thank the personnel of the Madras Publishing House for the care with which they have brought out the book in its present form.

MADRAS,
INDEPENDENCE DAY, }
AUGUST, 1949 }

T. V. S.

PSYCHOLOGY AND ART OF EDUCATION

PART I

FUNCTIONS OF THE MIND AND THEIR DEVELOPMENT

PSYCHOLOGY AND ART OF EDUCATION

PART I

FUNCTIONS OF THE MIND AND THEIR DEVELOPMENT

CHAPTER I

EDUCATION AND PSYCHOLOGY

Every art aims at some good. Education is an art. And so, it is reasonable to ask what is the good which it aims at. We may answer this question roughly by saying that Education aims at securing for every individual the conditions, under which individuality or personality is most completely developed, and which enable him to make his original contributions to human life as fully and as truly characteristic as his nature permits.

As the primary concern of Education is thus the individual, it is plain that its theory has much to do with an understanding of the Psychology of his Mind. And so it is that the most interesting feature in Modern Educational Theory is the recognition of the intimate relationship between Education and Psychology.

There are three very broad points that scientific Psychology has established, which are recognized in the present day educational practice :—

- I. The Correlation between the Mind and the Body.
- II. The Brain is the chief organ of the Mind.
- III. The Mind is an Organism.

I. The Correlation between Mind and Body

The influence of the Mind and the Body upon each other has come to be recognized only very recently, though still not sufficiently applied in practice. Till very recently the Mind and the Body were treated as separate, and they were even looked upon as antagonistic, so much so that the Spirit was sought to be elevated at the expense of the Flesh. (Compare Asceticism and Sanyasism). The bodily senses were not recognized till very recently as being the chief instruments for furnishing knowledge. And to a great extent knowledge was based upon Tradition and not upon an Investigation of Nature.

As a result of the recent recognition of the mutual influence between the Mind and the Body, we have in the present day Educational practice great attention paid to the following:—

- i. School Hygiene, ample accommodation, good lighting and ventilation, spacious compounds, good sanitary surroundings, well-laid school gardens, school architecture, and class-room decoration.
- ii. Attention is also paid to feeding and clothing very poor children, and to rules and enactments saving little children from being over-worked.
- iii. Another practical result is the organization of games and sports and the great attention paid to the Physical Welfare of the pupils.
- iv. A fourth feature of Modern Educational Theory is the Training of the Senses.
- v. And lastly, we find that pupils are now assigned Practical Work with reference to almost every subject. They no longer depend on mere book-knowledge. They learn by *doing*.

II. The Inter-relation between the Brain and the Mind

Quite allied to the correlation between the Mind and the Body is the inter-relation between the Brain and the Mind. The connection between the Brain and the Mind has come to be established on several *strong evidences*.

Injury to different parts of the Brain bring about mental disorders which vary with the character of the parts affected. Injury to one part results in the loss of speech. Injury to another part leads to even loss of personality, and to a complete change in the outlook and general attitude of the person.

So intimate is the relation between the two that we now use the words, 'Mind' and 'Brain', almost synonymously. We speak of an intelligent man as a man of brains. This intimate connection shows that mental activities do not exist by themselves, but have certain corresponding physical activities. In technical language we state this fact thus: 'Every mental process is psycho-physical'. We shall deal later, in a more detailed manner, with the question as to *how* the activities of the Brain and the Nervous System form the physical basis of mental life.

III. The Mind is an Organism

The older view regarded the Mind more or less as an inert mass, as something of the nature of clay or wax which could be moulded by the teacher into any shape he pleased. It is now seen that this is a mistaken view. The Mind is now recognized to be an organism, i.e., a form of life which grows and develops by its own inherent activity just as an acorn grows into an oak, a kitten into a cat, and a baby into a man or a woman. Every form of life possesses a power like this. It is peculiar to itself. Its growth or

development depends upon the manner in which it is able to adjust itself to its Environment.

THE EQUIPMENT OF AN EFFICIENT TEACHER : Some Practical Points for the Teacher

Now, what is the practical point for the teacher arising out of these details? The point is that most of his work should consist, not of loading the mind of the pupil with lots of book-knowledge, but of properly controlling and regulating the *self-activity* of the pupil. In modern educational practice the teacher is not the only important factor, but the pupil is also equally important.

There should be an interaction between the pupil's activity and the teacher's activity, if there is to be success in the educative process. The importance of the pupil's activity was ignored in the olden days. The teacher did everything. The pupil counted for nothing. He was a mere passive listener. But now, thanks to the results of Psychology, the Educator's task is not merely imparting of knowledge, but regulating and directing properly the Educand's self-activity. Education is certainly more than teaching. It includes the influence of the Educator's personality, the exercising of his spiritual influence over his pupils.

We said previously that the older view regarded the Mind as something like wax or clay and pointed out the error in this view. But we should add in this context that this imagery is not altogether without truth. Though 'the whole of the mental nature cannot be modified, still there is some part at least which is liable to be influenced. Every impression reaching the *mind* from without causes some modifications, however faint that may be. These modifications may fade for some time. But they never actually disappear. They persist. This characteristic of the mind, viz., its *modifiability* by successive experiences, is known as mental

plasticity. It should not be, however, supposed that the mind yields all at once or completely to external influence. It is peculiar that, while it is liable to yield to external influence, at the same time it is strong enough not to yield all at once.

This shows what a difficult thing the child's mind is to deal with. While it is plastic it resists also. While it resists it is plastic also and yields. And so, the Educator's task, viz., the directing of the pupil's self-activity, is no easy job. The Educator should possess a thorough knowledge of the Nature, especially the mental nature of the pupil, and of its Physical counterpart. Thus, a knowledge of Psychology, and of the Physiology of the Nervous System, becomes an essential requisite in the teacher. It is true that a class consists of several children, each with his own peculiar characteristics. But, they all work and acquire knowledge, organize it and reproduce it, according to certain *laws*. And it is from Psychology that we know about those laws. Psychology also gives us a knowledge of the details of the *stages* of mental development.

The Child Study Movement

To understand the course of mental development in general we have to study first the lower types of mental processes. It is for this purpose that in recent times the *Child Study Movement* has been started. For a knowledge of the earlier mental processes we should depend on an accurate observation of the behaviour of children. This work of drawing inferences from the observations of children's behaviour has to be done with great tact and caution. A good deal of sympathetic imagination and buoyancy of spirit are also required. And further, observations should be made quite unobtrusively so that children may not be obsessed by the idea that they are being observed.

Our knowledge about the ways and capacities of children has been much widened by recent experimental investigations. And a good deal of light has been thrown on the *Problem of Fatigue*, which resulted in striking departures in practices regarding the curriculum and time-table, distribution of subjects and length of school day.

The Teacher and the Psychologist

Finally, we may note here the difference between the attitude of the Teacher and that of the Psychologist towards children. The latter deals with the child's mind in the abstract, whereas the former deals with individual concrete minds and their variety of peculiarities and eccentricities. And further while the Psychologist's attitude is merely intellectual, the Educator's attitude must be to some extent emotional, something like the attitude of the parent towards his children. There is no doubt that the Educator has to depend to a large extent upon Psychology. But this is not everything. He has to answer three main questions which lie outside the scope of Psychology. These refer to :—

1. The end and aim of Education ;
2. The subjects of study ;
3. The methods of instruction.

Thus we see that while the Teacher depends on Psychology in his work,—yet, “a teacher is not a mere Psychologist, and Education is more than applied Psychology.”

The reader will find it useful to read Chapter VI : PSYCHOLOGY AND EDUCATION BY DR. M. W. KEATINGE, published in PSYCHOLOGY AND THE SCIENCES, edited BY DR. WILLIAM BROWN.

TALKS TO TEACHERS BY J. W. JAMES, EDUCATIONAL PSYCHOLOGY BY J. S. ROSS and EDUCATIONAL ESSAYS BY PROFESSOR JOHN DEWEY.

PSYCHOLOGY OF EDUCATION BY J. WELTON.

SOCIAL STUDIES AND WORLD CITIZENSHIP: Brimble and May (Macmillans) Chapter XIV.

CHAPTER II

NERVOUS PROCESSES AND MENTAL ACTS

(A) Nervous System

The Brain and the Nervous System of which it is the central organ, and all their activities form the physical basis of mental life. Hence the need for the teacher to pay special attention to the study of the Brain and the Nervous System in relation to mental activities.

The Nervous System is a connected set of Physiological structures composed of organized forms of living matter. This system consists of two sets of structures :—

(1) Compact masses known as *nerve-centres* lying protected within the bony covering of the skull and the backbone.

(2) The extensive threadlike spreading substance called *Nerves*, connecting the central masses with the outlying regions of the body.

Again, the Nerves are of two kinds :—

(1) The first kind of Nerves are those that connect the nerve-centres with the outlying surfaces, which are susceptible of being acted by external agencies, such as mechanical pressure, heat, light, etc. Their function is to transmit the Nervous activity produced by the stimulus to the centre. They are known as *in-carrying* or *Sensory Nerves*.

(2) The other kind of Nerves connect the centres with the Muscles. They carry the Nervous Impulses from within outwards. They are known as *out-carrying* or *Motor Nerves*. Since the out-going activity is connected with movements they are called *Motor Nerves*.

The Brain and the other Nerve Centres are made up partly of grey masses and partly of white masses of matter having a cellular structure, a structure consisting of cells.

The function of these cells is to transform the Sensory Stimulation into Movement, and to adjust the latter to the former. Their function is also to bring together the results of the different sensory stimulations and to adjust Complex Groups of movements to Groups of Impressions.

The Nerve centres are arranged in a series of growing complexity. The lower centres are those residing in the backbone, and they are known as the *Spinal Column*. The higher centres are lodged in the skull, and they are called the Brain.

The Brain consists of three parts :—(1) The Major Brain or the *Cerebrum*, situated in the front portion of the skull. (2) The Minor Brain or the *Cerebellum*, situated in the back portion of the skull. (3) *Medulla Oblongata*, which is above the *Spinal Column*.

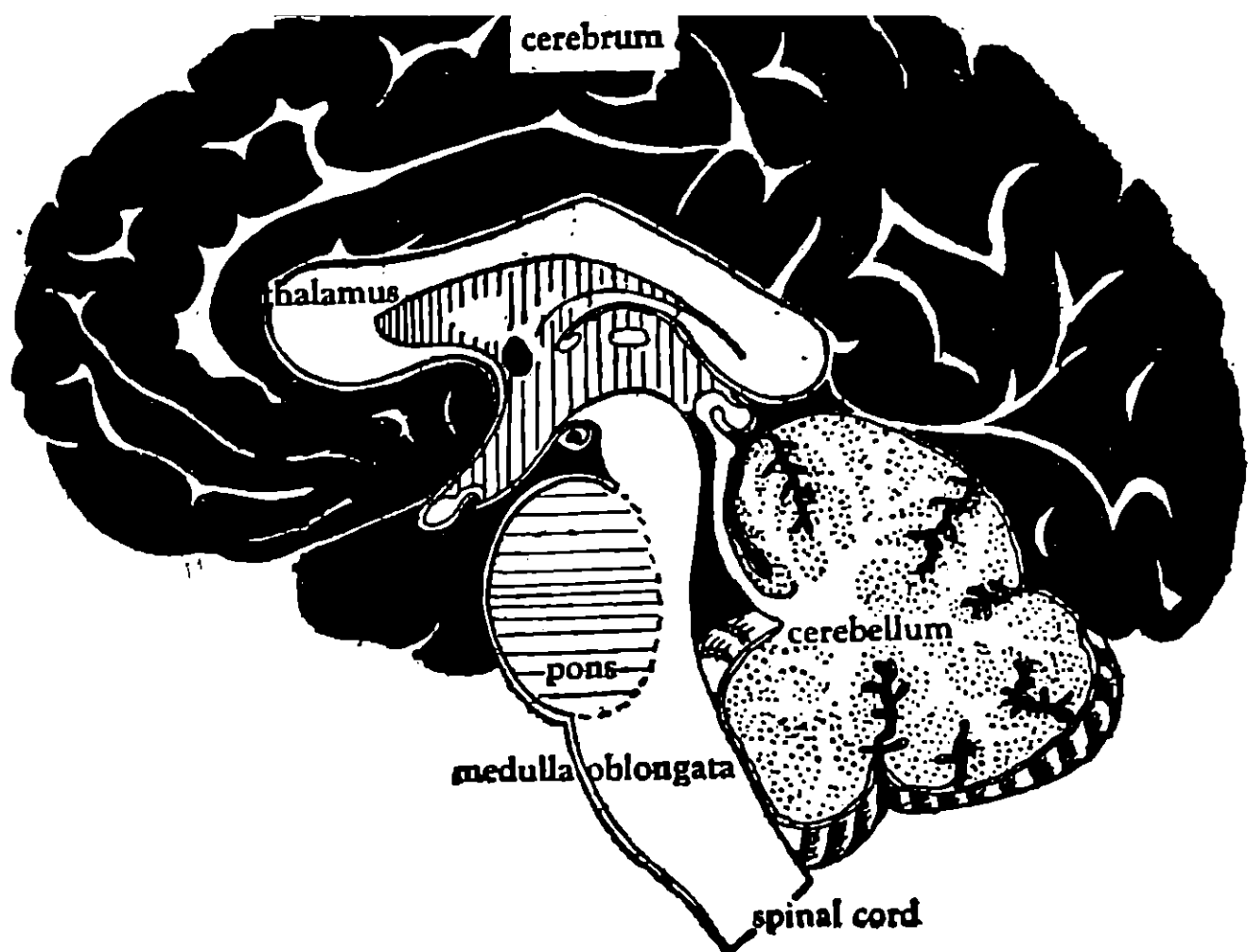
The general form of a nervous action is a process of Sensory Stimulation followed by one of Motor Excitation. This scheme roughly represents the simple type of actions known as *Reflex actions*, i.e. movements in immediate response to external stimulus.

(B) Reflex Actions

Reflex actions are of two kinds :—

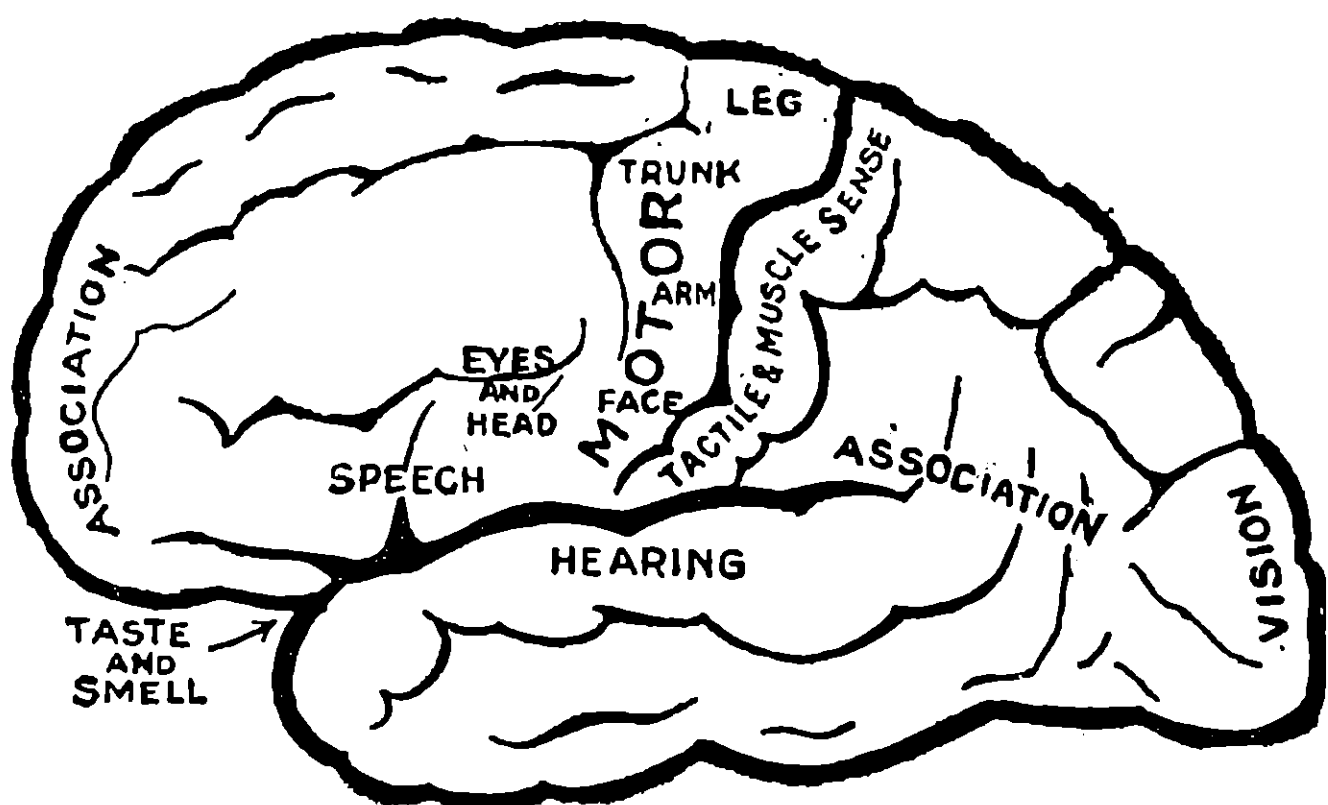
- (1) Those unattended by any mental activity.
- (2) Those attended by some form of mental activity.

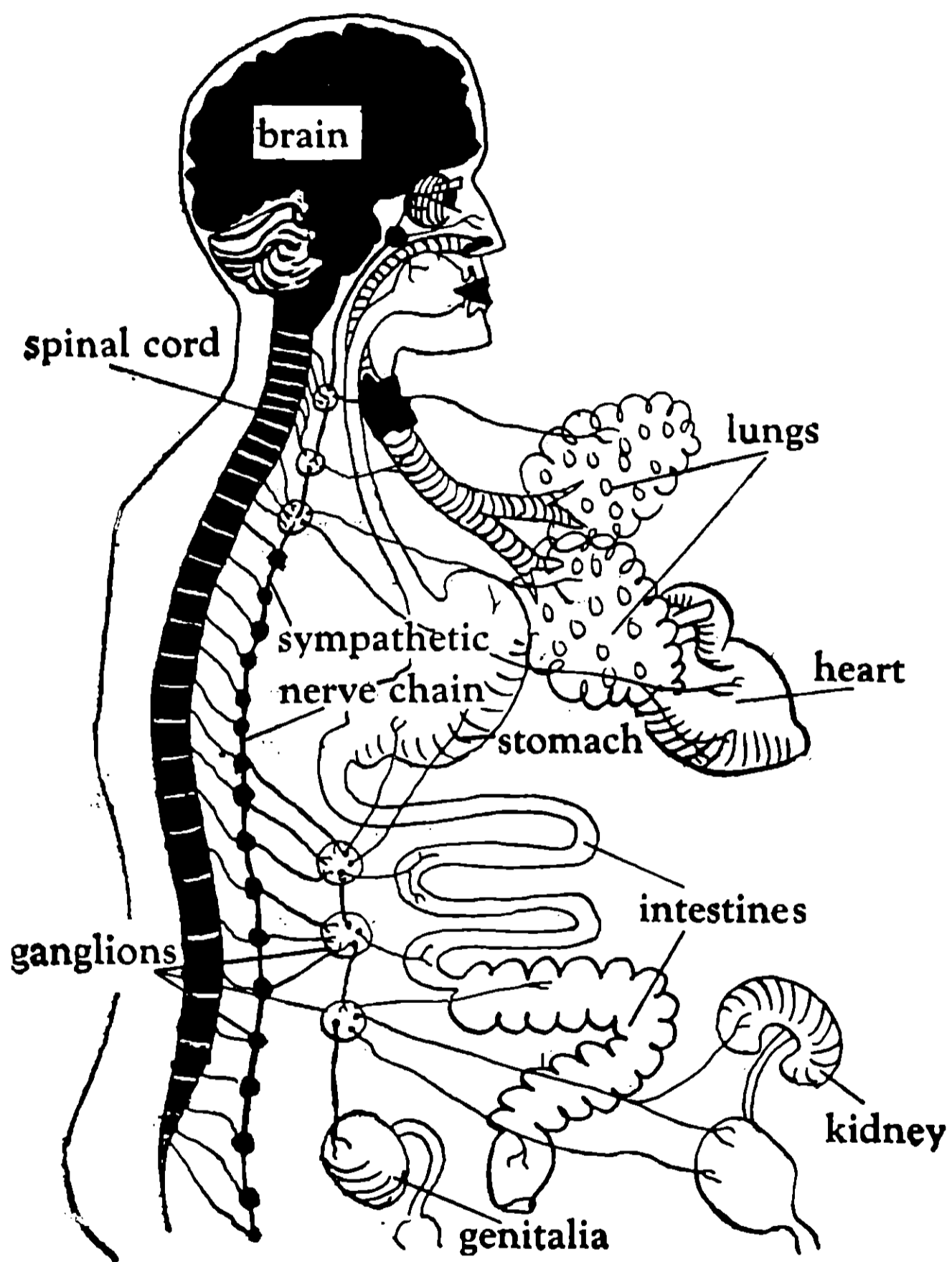
(1) Those unattended by any mental activity are unconscious. They are affected by means of the lower Spinal centres. *Example*.—A sleeping child rubbing his cheek when touched gently with a feather. Such reflexes are called *Pure or Unconscious Reflex actions*.



A lengthwise section of the Brain.

The Sensory, Motor and Association areas of the Human Brain.





The Sympathetic Nervous System.

(2) Those reflexes attended by some form of mental activity or consciousness. In this case the sensory stimulation, instead of passing over at once to a motor impulse, is propagated further through a larger portion of the central structures. These are followed by consciousness. These Reflex actions are administered by the Medulla Oblongata, Cerebellum or Cerebrum, according to the nature and importance of the stimulus. All these are *Conscious Reflex Actions*; and they are of three kinds.

(a) Those actions disposed of by the Medulla Oblongata are of a simple kind like the unbuttoning of the tight collar of the shirt. They are conscious, but do not involve deliberation. So they are called '*Simple Conscious Reflex Actions*.'

(b) Some of the conscious deliberate Reflexes are disposed of by the Cerebellum. Such Reflexes are involved, for example, in the understanding of a note on Psychology or a book on Economics. These are called the *Simple Deliberate Reflexes*.

(c) Some other Conscious Reflexes, which involve most complicated deliberation, are disposed of by the Cerebrum. Such Reflexes are like those which a scientist has while engaged in his research work or those which a statesman has on the eve of some great national crisis, in which a grave political problem has to be urgently and carefully solved. These are called '*Complex Deliberate Reflexes*.'

We may list all the different kinds of Reflex Actions in the following way :—

- (1) Unconscious Reflexes (Controlled by the Spinal Cord).
- (2) Conscious Simple Reflexes (Controlled by the Medulla Oblongata).
- (3) Conscious Simple Deliberate Reflexes (Controlled by the Cerebellum).

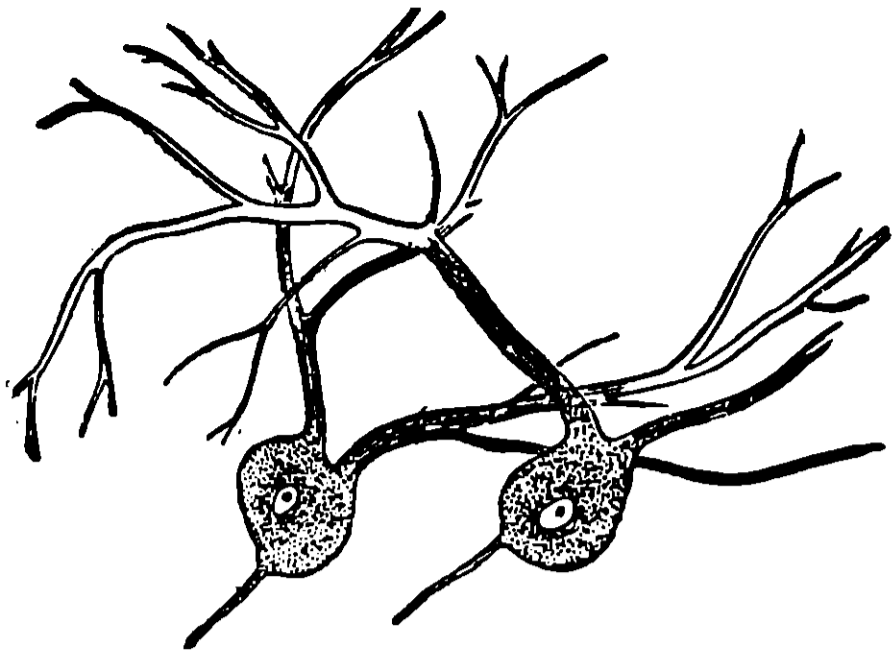
(4) Conscious Complex Deliberate Reflexes (Controlled by the Cerebrum).

It is still uncertain as to what precisely is the *nature* of the Nervous action. It appears to be some form of molecular movement of a vibratory character, i.e., propagated in a vibratory manner.

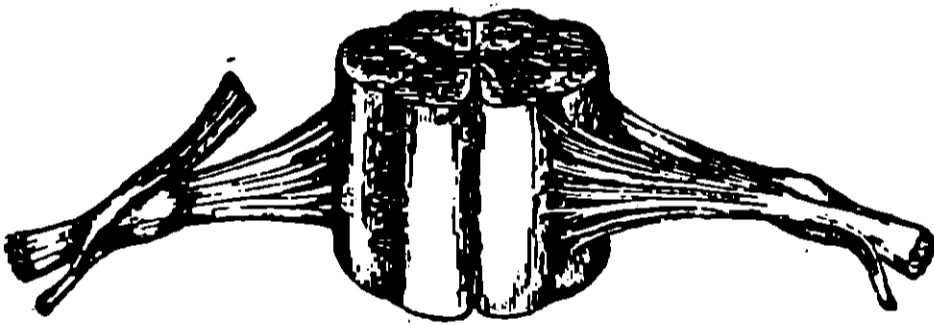
Caution for the Teacher

We are now in a position to realise how the nervous system which forms the physical basis of all mental activity is quite an intricate and complicated living machinery. Influences from the outside world affecting any one part of this machinery will originate impulses which are liable to extend easily to the rest of the mechanism. When we remember how easily susceptible are children to outside influences, we shall realise the extent to which the faintest influences may operate, and what risk there is of over-exertion and fatigue being brought on by the ignorant teacher who forgets, or who is not aware, that there is a physical counterpart to the mental activities. It should always be remembered by the teacher that the quantity of mental work that can be expected at any time will depend upon the condition of the Brain and the stage of development reached by it.

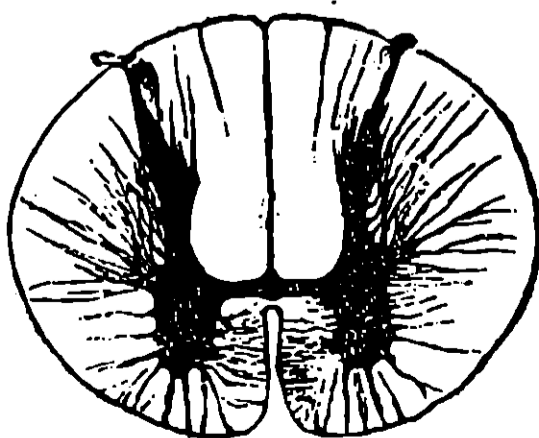
For a fuller knowledge of the Nervous System, the teacher with advantage may turn to Chapter XVIII of PHYSIOLOGY FOR BEGINNERS by FOSTER and SHORE. Chapter VIII of PSYCHOLOGY: A STUDY OF MENTAL LIFE by R. S. WOODWORTH. Chapter III of THE GROWTH OF THE MIND by K. KOFFKA (Translation by R. M. Ogden).



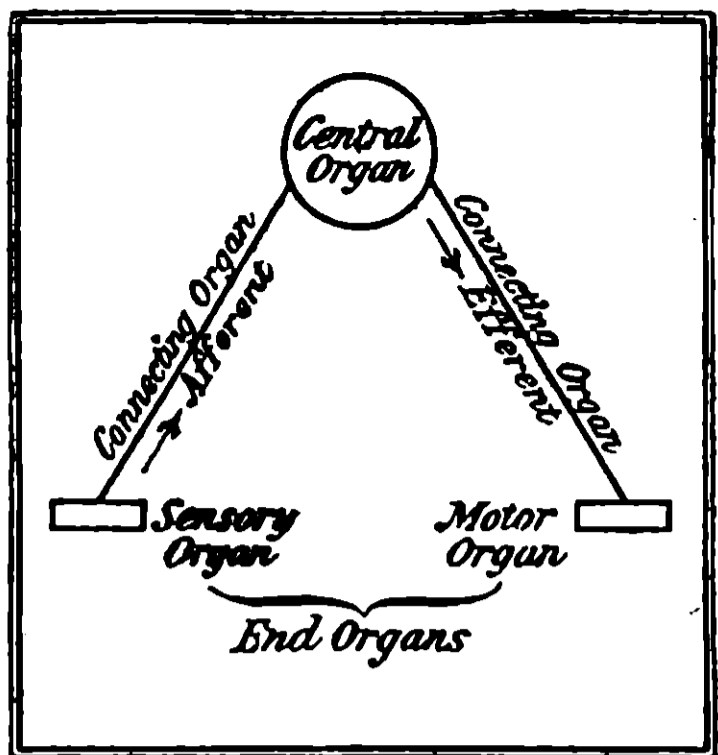
Nerve cells in the Brain.



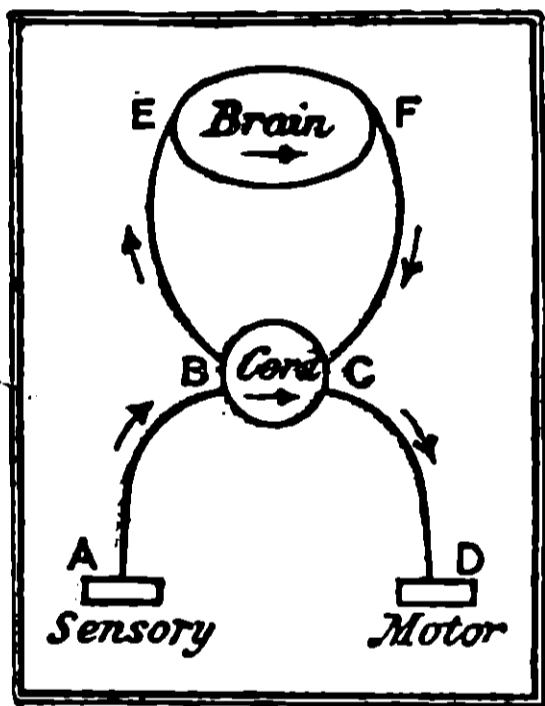
Roots of Spinal Nerves
issuing from the Cord.



Transverse section of the Spinal Cord.

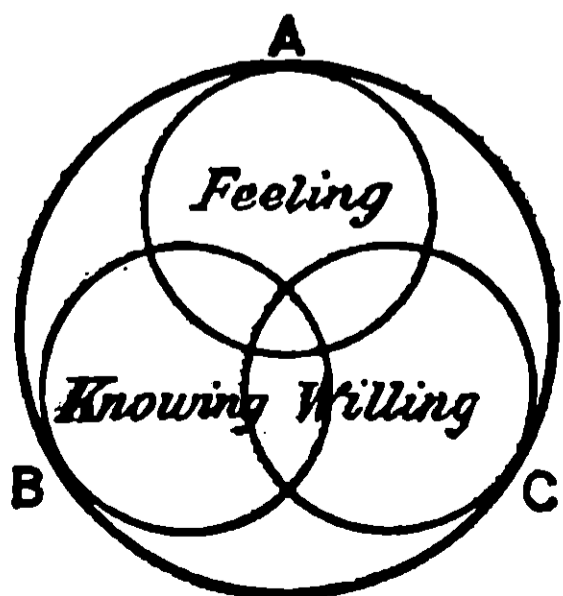


Representation of a Nervous Circuit.



ABCD—Lower Nerve Circuit through the Cord.

ABEFCD—Higher Nervous Circuit through the Brain.



Representation of Modes of Consciousness.

CHAPTER III

MENTAL LIFE

Consciousness

Items of Consciousness

The term “*Consciousness*” covers all forms of mental activities. From the most complex intellectual life down to the state of dreamless sleep, there are varying degrees of consciousness. When we are aware of anything in any manner, we are said to be conscious.

At any given moment several items enter into our consciousness. For instance at this moment you have several impressions. (1) You have the impression of these words. (2) You have the ideas I am trying to convey to you. (3) You have the visual impressions of what you see in the book. (4) The sounds outside cause distracting impressions. (5) There are also the annoying impressions of contact with inconvenient seats.

Field, Centre and Margin of Consciousness

All these items mentioned above simultaneously influence you. They make up what is called the “*Field of Consciousness*.”

Of these items, the impressions of ideas I convey to you are the direct objects of your attention. So they are said to occupy the ‘*Centre of the field of Consciousness*’.

The other impressions are incidental only. They do not receive your direct attention. But yet they are within the range of consciousness. They occupy the “*Margin of the Field*” of consciousness.

The Stream and the Level of Consciousness

Mental impressions and actions are in a state of constant flow, succeeding one another endlessly. And so we have the phrase. . . “*Stream of Consciousness*”.

Ideas occupying attention at any moment are said to be *above* the “*Level of Consciousness*”. Other ideas at the time are said to be *below* the “*Level of Consciousness*”.

The above facts show to the teacher that *Mental Life is intricate and complex*.

Three Aspects of Mental Life

Psychology distinguishes three different aspects of Mental Life :—

Knowing, Feeling and Willing

(1) When we Observe, Remember, or Reason, we are occupied with the *Knowing activity*. (2) When we are pleased or displeased, angry or frightened or excited in any way, we have *Feeling activity*. (3) When we deliberate, desire or avert, when we choose or avoid, we are occupied with the *Willing activity*.

These three are the three *modes* of being conscious or aspects of mental activity. These are the *ways* in which we are related to the outside world. (Take, for instance, a book that I read. In the first place I make out what I read. This is the *knowing aspect*. I am pleased or displeased with it. This is the *feeling or emotional aspect*. I seek to continue reading it or give it up. This is the *willing or the volitional aspect*.

Mental Life is one Organic Whole

Those three aspects never exist apart from each other. Every form of mental activity, however simple, is made up of these three elements. At a time any one only of the

three elements may be found to exist in a preponderating degree and the other elements may be in the back-ground. We name a particular mental state after that element which is preponderating. That does not mean, however, that the other elements are altogether absent. The teacher should understand that *Mental Life is one Organic Whole*.

Every object has got three dimensions, viz., length, breadth and thickness. All these three are present at the same time in the object. We do not say that there is length first, which leads to breadth, which in its turn leads to thickness. This is absurd. Similarly it is absurd to say that *Knowing* leads to *feeling*, and that *feeling* leads to *willing*. The fact is that these three aspects or modes of consciousness are present to a more or less extent in every mental experience.

Take, for example, a problem in mathematics. In the mental experience of solving the problem the predominant mode is *knowing* or cognition. The *willingness* to solve the problem and the *feeling* of pleasure in solving the problem are also present there though not in a predominant manner. In the same way, when some young persons are talking and laughing together, the aspect of *feeling* is predominant and the other two aspects, viz., *knowing* and *willing*, are in the back-ground.

Thus we conclude that it is incorrect to say that one mode of consciousness is the cause of another. The fact is that all these three modes of consciousness, though in varying degrees or intensity, are always found together in every mental experience. It is only for purposes of convenience for study that we distinguish them as three different modes or aspects of consciousness.

Reference :

EDUCATIONAL VALUES—BY A. SLEIGHT

KNOW YOUR OWN MIND—BY GLOVER

TALKS TO TEACHERS—W. JAMES

TEACH YOURSELF PSYCHOLOGY—BY W. E. SARGENT,
CHAPTER V

PSYCHOLOGY AND LIFE—LESLIE D. WHITEHEAD, CHAPTER IV

CHAPTER IV

FACTORS IN MENTAL DEVELOPMENT

In understanding the factors in Mental Development the main point to remember is that noted in the last sentence of the chapter on Mental Life, viz., that the Mind is an Organic Whole. The task of the Educator is to further its growth and direct its development as a whole.

A Common Mistake

It is a common mistake to suppose that the mind of a child is something like a fragment or a broken piece of the adult mind. It is likewise a mistake to ask which special power manifests itself at a particular stage. The stages of mental development do not correspond to the stages, for example, between a tree putting forth its leaves, and its bearing fruits. Mental development does not consist in a series where the several elements succeed one another. Each period must be considered to be a stage complete in itself, each stage being characterised by the individual's own modes of Thinking, Feeling and Acting, all at the same time. So mental development does not imply the birth of any new power at each successive stage. It implies a progress from vaguely appreciated experiences to experiences where the details are more precisely and definitely appreciated.

We shall indicate later on the essential characteristics of the different stages in mental life. In the meanwhile we shall take a brief survey of the various forms of *mental* activity that we find exhibited in some form or other in the different stages. To understand the various forms of mental activity, we have to go back to the three aspects,—Knowing, Feeling,

and Willing. Corresponding to each of these we have from the very beginning as the result of the inherited nervous constitution certain primitive endowments, with which we start in our career of mental development.

Our Primitive Endowments

(1) Corresponding to the *Knowing* aspect we have the capacity to appreciate sensations. By the term 'sensation' is meant the mental effect produced by an impression from the outside world being conveyed along the nerves of the special sense concerned—until the impression reaches a corresponding part of the Brain.

(2) Corresponding to the aspect of *Feeling* we have the capacity to be affected agreeably or disagreeably by the objects of our sensation.

(3) And, corresponding to the third aspect, *Willing*, we have certain primitive impulses tending to certain spontaneous movements or certain reflex activities.

In addition to those primitive or original capacities we have in the second place *certain powers* which bring to bear or exercise upon the sensations, the pleasures and pains, and the impulses and tendencies. These powers are: (1) *the power to notice points of resemblance*; (2) *the power to notice the points of difference*; and (3) *the power to combine mentally* a set or group of connected details, to combine them so strongly that when next we appreciate a few of the details we take the rest for granted. These three powers presuppose that we should retain our past experiences in some manner or other. We have to rely on our recollections of past experiences. And this is the fourth power. (4) *Retentiveness* or Retention. (5) And, lastly we also possess the power of Attention. Unless we attend to a present experience and unless we have attended to a similar past experience, we cannot

compare, contrast, or combine the one with the other. (6) Further, in addition to all these capacities and powers, which form our mental outfit, we have what we referred to already viz., “ *Mental Plasticity* ”.

And now, there is an important thing to notice viz. that, as our experiences multiply, there is a *facility* for our experiences getting strengthened. This means that, as we are acquiring new acquisitions, and as these new acquisitions are taking on the nature of well-established mental habits, there is still so much of mental energy spared for making fresh acquisitions.

What Mental Development mainly consists of

Now then; mental development consists in the more and more successful exercising of the powers noted above upon our sensations, our pleasure-pains, and upon our impulses. In other words, mental development consists in the better and still better ways of *adjustment to environment*. The more numerous and the more precise the similarities and the differences noticed, and the more orderly and systematic the combinations made among the sensations, the pleasure-pains and the impulses,—the more comprehensive are the ideas, the loftier the emotions, and the nobler are the resolutions and acts.

Reference.—

Chapters VI and VII of ELEMENTS OF PSYCHOLOGY—By
DR. S. H. MELLONE AND MARGARET DRUMMOND.

THE SCHOOL—By J. J. FINDLAY, Chapter V.

HERBARTIAN PSYCHOLOGY—By J. ADAMS.

THE PSYCHOLOGY OF CHILDHOOD TO MATURITY—By
J. B. GUILFOYLE WILLIAMS. Chapters VI, VII.

CHAPTER V

THE PERIODS AND STAGES OF MENTAL DEVELOPMENT

The Characteristics of the Periods or Stages of Mental Development

There are distinct stages of growth or periods of development in an individual, each stage characterized by its own special features, the individual exhibiting characteristic modes of Feeling, Thinking, and Acting. The Child-study movement has, within recent years, brought to light some valuable details of the features marking each distinct stage. Different educationists have, however, differently distinguished the periods. We note below the distinctions now generally accepted.

Age 1-6 Years : The Period of Infancy

This period is marked by the sway of senses. The special senses and their corresponding Brain centres are considerably developed. The first to manifest themselves are the senses of Taste, Smell and Touch. These are soon followed up by Hearing and Sight.

There are also in this period the beginnings of Memory and Imagination. But these forms of activity are very crude. Often objects are perceived wrongly. Remembering is not easy. Imagination is of an inferior kind and cannot distinguish fact from fancy. Hence children take delight in myths and fairy tales.

The feelings are mostly selfish. The actions are for the most part instinctive and imitative.

The sixth year marks the termination of this period and this is the time when children are sent to school.

(2) Age 6-8 Years : The Transition Stage

The school life of children may be divided into three distinctive periods :— 6-8 years ; 8-12 years ; and 12-18 years. The progress that an individual makes is not at a definitely uniform rate. Periods of growth are followed by periods of Comparative Quiescence, which are in their turn followed by periods of Growth once more.

The period of 6-8 years is known as the transition stage. This name is applied to a period which comes in between any two decisive periods. These years are marked by a relatively rapid growth of the body, a large portion of the available energy being utilized in the building up of the tissues. At this stage there is a co-ordination of the smaller muscles and the more delicate nerve-connections. There is greater susceptibility to fatigue and disease.

On the mental side the child at this stage is capable of only passive attention, that is to say, attention not voluntarily put forth, but attention secured by the strength of the object or of its some attractive feature.

Whatever the child at this stage does, it does only for immediate ends. So all its actions are to be described as non-moral. That is, the child does not understand and act upon the distinctions of right and wrong. Morality consists in subordinating the passing impulse of the moment to remote ends. But children at this stage are not capable of forming conceptions of remote ends.

(3) 8-12 Years : Formative Period

The eighth year marks the beginning of a definite stage. This is the time when the Brain reaches its maximum size and weight. While in the previous stage the body has marked growth, in this stage the body may be said to be comparatively resting. A certain amount of energy is directed to other purposes than the building up of tissues. The energy thus

set free is indicated by the *ceaseless activity* that characterizes children at this stage.

This period is known as the *Formative Period*. It is the time most suited for the formation of habits. This is the best time for drilling, repetition and for making all acquisitions of any value. Learning the pronunciation of a Language other than the Mother Tongue may well be adopted at this stage. The pronunciation rarely becomes perfect unless the necessary adjustments are made about this time.

Active attention and even concentrated efforts are now possible.

The child is yet capable of forming only concrete images. But the capacity for remembering is very strong. Verbal memory is at its best. The description of mind as wax to receive, and as marble to retain, is specially applicable to this period.

This is also the best period for developing *special moral habits*, such as cleanliness, obedience, industry, honesty and so on.

(4) 12-18 Years : The Period of Emotion and Reason

This may be sub-divided into two periods:—(a) 12-14 years; (b) 14-18 years.

(a) 12-14, *Years*.—This is another transition period. Here there is a certain lack of equilibrium. That is to say there is not much of definite adjustment between mental life and physical expression.

(b) 14-18 *Years*.—This is the early adolescent period (between childhood and manhood), the period of growth, vision and enthusiasm. Weakness and inexperience are the chief features of this age.

Physically there is a rapid perceptible growth and increase in height and weight. The liability to fatigue and disease is great. This period is characterised by very definite features and by sudden awakenings in every direction, so that it has been regarded as a new birth.

Intellectually it is a period of great expansion. It is during those years that many boys and girls realize the significance of their studies. The different subjects of study suddenly clear up. All the instincts characteristic of children are intensified at this stage. The idle curiosity of childhood and the instinct that manifests itself as regards puzzles, riddles, magic numbers, etc. develop into a desire or love of knowledge for knowledge's sake. There is also the rise of that deeper interest that seeks to find out causes and hidden relations. The instinct of imitation develops its purposive activity. The instinct of emulation becomes more organized and forms the basis of lofty ambition. The power of abstract logical reasoning, of viewing comprehensively the details in Science or in History, and the capacity for critical appreciation of Literature are all distinct characteristics of the period.

This is also a period of great emotional changes, of emotional instability. The individual who has been till then self-centred exhibits social tendencies. The feelings and emotions already swaying the individual appear now more strongly, and new ones assert themselves. There is such a suddenness about these that the individual is often very impulsive so that this period is usually regarded as quite a critical period. Any injudicious method on the part of the parents or the teacher in dealing with the youth at this stage may result in permanent harm. There should be no longer any arbitrary authority. Punishment should be given up altogether. Advice and appeal to reason should take the place of commands. Violent outbursts of temper or moods of despondency which are sure to come upon the individual at this

stage should simply be ignored by the parent or the teacher; for the storm will soon be blown over, and the mental balance quickly restored.

This is again a period of *Enthusiasm*. The rage for reading, for composing poetry which we see sometimes exhibited are instances of this enthusiasm. To the cynical old man these exhibitions may appear amusing. But they should by no means be snubbed. Activities such as these provide a good outlet for the overflowing emotions of an youngster and any check put upon them will either throw him into a fit of passion or will lead him into melancholy reflections regarding himself. Care therefore should be taken to direct his enthusiasm properly. Getting young men to take a healthy interest in organized games, giving boys at school authority and responsibility in managing the affairs of their classes are valuable ways of utilizing their enthusiasm. Great care should be taken to see that moral atmosphere is wholesome and pure.

This is also a period of great *Religious awakening*, the period when great ideals come to the front. It is the conflict of these ideals with the existing concrete conditions that leads to the storm and stress in the mind of the youth which has led to this period being regarded especially dangerous. Speaking of the period as a whole, the changes brought on are so sudden that the methods of treatment adopted by the parent or the teacher will have to be altered in a day.

We have thus taken a brief survey of the different stages or levels of mental life of our pupils at school.

Summary

We have four distinct periods in the mental development of children :—

- (1) *The Period of Infancy* (1-6 years).—marked by the sway of senses.

- (2) *The Transition Period (6–8 years).*—Here we have to deal almost exclusively with concrete experiences, abstract logical reasoning being entirely out of place. The work assigned to pupils should involve a minimum of strain and fatigue. Moral culture is only of pleasure-pain kind.
- (3) *The Formative Period (8–12 years).*—Here repetition and drill are methods most effectively employed. This is also the period for the cultivation of specific moral habits.
- (4) *The Period of abstract Reasoning.*—Moral culture is now of the rational type. Further and remote ends can be appealed to with effect. This is the period best suited for inculcating lofty ideals.

Reference.—

- PSYCHOLOGY IN HUMAN AFFAIRS—BY DR. J. STANLEY GRAY, Chapter III.
- THE PSYCHOLOGY OF EARLY CHILDHOOD—BY C. W. VALENTINE.
- CHILD PSYCHOLOGY—BY DR. MARGARET WOOSTER CURTI.
- THE GROWTH OF THE MIND—BY K. KOFFKA, Chapter IV.
- UNDERSTANDING HUMAN NATURE—BY A. ADLER (ALLEN & UNWIN), Chapter III.
- ADOLESCENCE—BY PROFESSOR STANLEY HALL.
- EDUCATIONAL PROBLEMS—BY PROFESSOR STANLEY HALL.
- PSYCHOLOGY AND LIFE—BY LESLIE D. WEATHERHEARD, Chapter X.

CHAPTER VI

THE TRAINING OF THE SENSES AND OBSERVATION

The Need for Sense-Training

We dealt with the different stages of Mental Development in general. Hereafter we have to take up for detailed consideration the important activities that come under the Knowing, the Feeling, and the Willing aspects respectively.

Under the heading, “Knowing”, we have the processes of Perception, Imagination, Ideation or Thinking. The first of these, *Perception*, is first the process of receiving information regarding the outside world by the way of the Senses.

In all normally endowed persons the Senses may be said to possess their powers in perfection. Still they are so often liable to go wrong. They are liable to mislead sometimes. We do have very often the illusions of the Senses. Hence the need for their proper training.

The Message of Montessori and Helen Keller

The Senses have now come to be recognized as the gateways of knowledge and a very important place is given to the training of the Senses in the education of the child. Madame Montessori's method of education is based on the belief of “the possibility of liberation of the imprisoned spirit of man by the education of the senses”. Helen Keller, who, though born blind, deaf and dumb, rose to the highest culture through perfecting the sense of touch, is an eloquent symbol, a living document of this miracle in education. There is no wonder then that now the old-time-ordered traditional methods of study have come to be given up and investigation into nature's ways according to inductive methods of enquiry has rightly taken their place. First-hand knowledge of things is emphasized at the present day. And this can be made avail-

able only by way of the Senses. The most abstract knowledge is, in its ultimate analysis, traceable to the materials supplied by the Senses. Hence the need and the importance of the Sense-training.

The Double Value of Sensations

It may be remarked, however, that all the Senses do not deserve equal attention. But all sensations have a double value. They have a Pleasure-giving value, and a Knowledge-giving value. Sensations whose Pleasure-giving value is great are:—(1) the Organic Sensations, (2) Sensation of Taste, and (3) Sensation of Smell. It is very difficult to discriminate between varieties of these sensations. And it is supposed that where discrimination is difficult, no knowledge, worth having, can be gained. So their Knowledge-giving value is comparatively less. But, on the other hand, the Sensations of Touch, Hearing and Sight are of immense intellectual value, and so their training requires special attention.

Touch, Hearing and Sight

In combination with the Muscular sense, the above three senses, viz., Touch, Hearing and Sight, afford to us very important knowledge of the details of the outside world. All our knowledge of space, of the dimensions of objects, of the weight of objects, their hardness or softness, their roughness or smoothness, our knowledge of all these important details we owe to the Sense of Touch. It is this sense that gives us first-hand reliable knowledge. What we fancy we owe to sight, we, in reality and in the first instance, owe to Touch. The born-blind man who is thrown entirely on this single resource acquires a wealth of information that will astonish the seeing man. The example of Helen Keller is the most remarkable that we may note with interest.

The sense of Hearing gives us all the knowledge that sounds can impart. We judge of directions and distances with the

help of this sense. To this also we owe the loftiest pleasures of music. And our perceptions of time are traceable to the sensations of Hearing.

With the help of the sense of Sight we are able to discriminate colours and forms, the sizes and shapes of objects, their bulk or solidity, etc. In fact the perceptions of sight must be said to be rich and numerous. We are able to take in with a single glance of the eye a whole range of objects, also objects at vast distances. Painting, Sculpture, Architecture—are all appreciated by the sense of Sight! It is therefore these three “Intellectual Senses” that have to be particularly trained. The Knowledge-giving value of the other senses is low and they have given place to acuter powers.

What we mean by Training of Senses

What do we mean by the “Training of Senses”? It is true that in the case of all persons normally endowed the senses are more or less perfect in their structure. But we have not merely to use them, we must also be able to judge aright with their help. There is therefore an advantage in going through systematic exercises which would render perceptions by way of these senses more effective. We should enable them by exercise to appreciate very nice shades of difference. Hence the need for bringing pupils into direct contact with a variety of similar and different objects. Broader differences should be presented first, and gradually finer differences. That these may be the better appreciated they should be presented *in immediate succession*, the experiences being varied and repeated.

The playful occupations of children afford facilities for this kind of training. For instance, children may be required to name the objects lying about them, feeling them by their hand and with their eyes blind-folded. They may be made to compare pieces of wood and of metal, pieces of cotton, silk,

wool, etc. They may be made actually to feel one pound of weight or half a pound of weight, and be required to judge the weights of a number of objects by lifting them up. Similarly with the help of a yard-measure or a foot-measure they may be called upon to estimate the dimensions of objects. They may also be exercised in the discrimination of colours by symmetrical arrangements of coloured bits of paper. Exercises like these will improve what is known as the *discriminative sensibility of the Senses*.

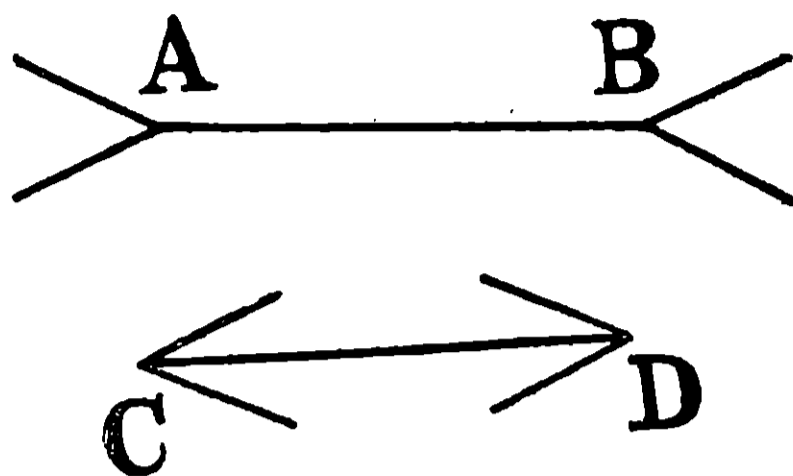
OBSERVATION

What is Observation ?

All Nature-Study Lessons, where Observation Work is done for the most part, can be made to contribute to the training of the Senses. School excursions, visits to museums, parks and fields, to the aquariums and the sea-shore, drawing, and all forms of manual and laboratory work, are of value because of the training they afford to the Senses. They give first-hand knowledge of things. The greater the opportunities so afforded to the pupils, the better are they able to discover points of similarity and difference, and therefore the more effectively are they able to *adjust* their behaviour to their surroundings.

Systematic exercises of the kind noted in the last chapter lead to what is known as 'Observation'. By Observation we mean "Perception properly regulated". There is certainly a great need for regulating our perceptions. In our common experience, we know that the testimony of the Senses is not always dependable. We have illusions of the Senses.

In every process of observation there are three factors involved:—(1) receiving the impressions, (2) selecting some of these for special attention, (3) our interpreting these specially selected impressions. The amount and the quality



A B and C D are equal in length. But A B appears longer. This is a case of illusion.

of the knowledge we possess determine as to what we select and what we reject. If our knowledge is imperfect then our selection is likely to go wrong. Again, in interpreting an experience we rely to a large extent upon past experiences. Therefore the accuracy of all inter-relation depends upon the definiteness of past experiences.. Besides, every interpretation involves some reasoning. But the reasoning is unconsciously gone through. And so any error creeping in is easily liable to escape detection.

Observation Requires a Mental Background

There is an erroneous notion about Observation. It is sometimes supposed that there is a general power of observation, i.e., a power which can work effectively in every department of the external world. But this is a mistake. A man can observe with profit only in the direction in which his attitudes and interests lie. Two men may happen to see the same thing. And yet the mental impression produced and the activity called forth in each of them may be quite different, for a great deal depends upon the contents of the mind.

From what is said above it may be seen that it is useless to send out an ignorant man with instructions to observe everything in a new district. As he has no previous know-

ledge with which to assimilate the new impressions, he will pass by most part of what he sees. We have seen how observation involves selection. Now, Selection depends upon what by Nature or by Habit we are inclined to do. The more then a man knows, the more he sees. So, Observation needs a mental background of organized *knowledge*, and a dominating *purpose*. It involves an elimination of the irrelevant.

An ignorant man does not observe widely. He only gapes. In real observation, "the new perception is apprehended by an organized mass of ideas already in the mind. If there is no mass present to which the new perception can attach itself, the process is not one of observation, but of gaping". Prof. Adams sums up the position thus: "To cultivate Observation, then, is not to train the eye, the ear, the hand, to extreme sensitiveness, but rather to *work up well-organized knowledge* within the mind itself."

RECIPROCAL INTERACTION OF INTEREST AND KNOWLEDGE

If we desire minute observation in a definite direction we must cultivate special knowledge to correspond. If we wish to encourage general observation, we can only succeed by cultivating wide interests. True observation is the reciprocal interaction of interest and knowledge in relation to external facts. Where your treasure is, there will your heart be. In the same way we may say, "where your interests lie, there will your observation be discriminating."

Reference.—

The following are valuable for reference on the topic of this chapter.
Chapter XII of ELEMENTS OF PSYCHOLOGY—BY S. H. MELLONE.
EDUCATIONAL PSYCHOLOGY—BY J. S. ROSS.
LOGICAL BASIS OF EDUCATION—BY J. WELTON.
PSYCHOLOGY OF EDUCATION—BY FRASER.



ATTENTION

What is Attention ?

We have seen that Perception consists in our interpreting a present experience in the light of similar past experiences. If we are to have correct Perceptions, we should *attend* carefully to our present experience. We should also have carefully attended to our past experiences and retained them or remembered them carefully. That means that Perception involves Attention and Retention. We shall now take up Attention and see what it means.

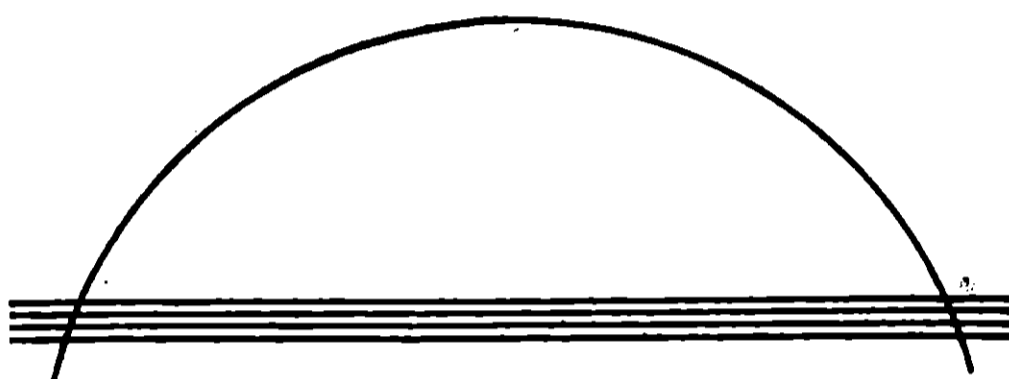
We may mention at the very outset that attention is not a normal feature of mental life. There are occasions when we are in a state of mental repose, an absolute passivity of the mind, in which we cannot be said to be attending to anything. We exhibit then none of attention. This is the mental attitude implied in the word '*distraction*'. In this there is only a dull level of simultaneously presented impressions.

Distraction

For example, when I lie on my back in the moonlight, resting, and thinking of nothing in particular, my attention is diffused. I am conscious of agreeable coolness, of ease and comfort, of the songs of birds, the blue of the sky, and so on. And, in the background of my mind there is perhaps a memory of my past duties done, of my by-gone friendships, and the anticipation of enjoyable leisure to come. These and probably other ideas are present together in consciousness. The total force of my attention is diffused or scattered amongst them. This is exactly what is meant by a state of '*distraction*'.

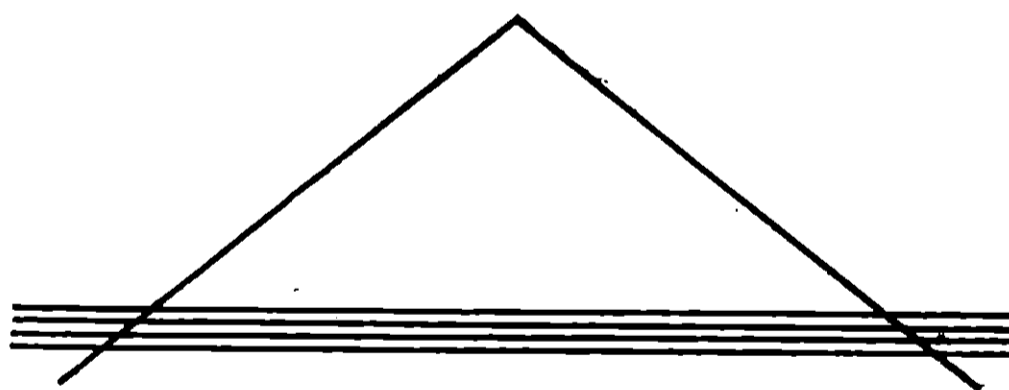
Mental Absorption

There are again other forms of mental attitudes. Suppose in the situation mentioned above a bee stung my hand. My attention at once flies from every other idea and is concentrated upon the bee sting. Before the advent of the bee the wave of my consciousness was something like this :—



My consciousness before the advent of the bee

The sting of the bee changed this wave into something like this :—



My consciousness after the advent of the bee

Here the attention is concentrated, as it were, on the apex, the bee-sting. Thus we attend to an idea, not for the sake of the actual object, but for the sake of the feeling, here for example, the feeling of pain. I attend to the bee-sting because of the suffering it entails. Similarly I attend to a drama because of the feeling of pleasure it gives me.

Now this state of mind is called 'absorption'. Very often we are absorbed in the objects around us, and we manifest all the ordinary outside signs of attention. But even here we cannot be really said to be attentive. When we are attending to a drama, for instance, we are apparently in an attentive attitude. But, in reality, our minds are held, so to speak, by the scenes before us. It is those scenes, but not we, that determine the flow of our ideas. In these cases there is no voluntary activity of the mind put forth. Here we surrender ourselves to the influence of the surroundings. And so this state of mind is described as one of *mental absorption*.

Children are mostly capable of only this kind of attention. Their mental life must be said to be wholly determined by the attractions of the objects around them. When a child begins to follow with his eyes a bright light or an attractive object because by so doing it finds it can prolong its pleasure, it may be said to have taken an important step in the direction of attention. Children's attention is first given in connection with their own activities. And gradually their attention gets connected with the activities of other persons or things. Further, they more easily attend to movements than to static or inert things. For instance, it is easier to secure their attention to the description of a tiger-hunt than to a description of the tiger's structure or appearance.

Active Attention or Attention Proper

When, however, the course of ideas is controlled by our own mental activity, when we have a purpose to achieve, and when we speak of appropriate *means* of fulfilling it, and when every idea that suggests itself is tested in the light of our purpose and admitted or rejected, we are said to be attending in the proper sense of the term. In this active attention we try to shape our own course, and instead of

allowing circumstances to mould us, we try to mould circumstances. Active attention is the way of self-control.

This active attention proper may be defined to be *an active self-direction of the mind with a definite purpose*, so that only a few select impressions are held prominently before the mind. Two things may be said about this attention proper :—

TWO ASPECTS OF ACTIVE ATTENTION

(1) Negative Aspect

This attention proper therefore implies both a positive and a negative aspect. To the extent that the selected impressions are prominent, they are rendered more complete, definite, and precise. This is the positive aspect. To the same extent there is a lowering or receding into the back-ground of other simultaneous impressions. As for example, to look attentively at an object is for the time being to be partially deaf to sound. This is the *negative aspect*.

(2) Positive Aspect: Process of Adjustment

In the second place, Attention is a *process of adjustment*. A very feeble sound, for instance, may pass by unheeded, as it has not been strong enough to call forth the necessary re-action. So also, a sudden powerful sound, though it may surprise and frighten us, may fail to excite attention,—as there has not been time enough for the necessary adjustment. And again, when the mind is dull or pre-occupied, then also no adjustment is possible and therefore no attention can be enlisted.

When, however, adjustment is possible, attention may follow or may precede an impression. In the latter case we are said to be in a state of expectant attention. When, for instance, we expect a visit from a dear friend, we are,

so to speak, listening for the sound of his footsteps; and we recognize the sound, however feeble it may be.

We have just made brief mention of three forms of mental attitude: (1) *Distraction*, the opposite of attention proper. (2) The state of *absorption*, which is ordinarily referred to under the name, "*Non-voluntary or passive attention*". (3) *Active Attention* or attention proper.

Secondary Passive Attention

(4) There is yet a fourth kind, a superior kind of attention which may also be described as a state of mental absorption, such as is exhibited by a specialist. This is called the Secondary Passive Attention. A Botanist, for instance, gets absorbed in his study of a plant, regardless of the steps and sounds of a ferocious bull approaching him. Of the two impressions, the sight of the plant and the sound of the approach of the animal, one would take the sight of the plant to be the feebler impression. And yet it is this that absorbs the scientist's attention. *It is this kind of attention that marks the highest possible mental state. It is the chief condition of human progress.* 'The more a piece of work is reduced to a matter of course, the more power has the mind to advance to further work. This becomes natural and easy in its turn, and gives place to new work.' (William Glover: "Know Your Own Mind.")

General Features of all Attention

Some important things may here be mentioned with regard to attention:—

Attention is not one Steady Flame

We cannot attend to the same thing for long. The wave quickly rises and quickly falls. Ordinarily we cannot attend to one thing or to one aspect of a thing for more

than five or six seconds. The longest stretch of attention possible is perhaps not more than thirty seconds. When we seem to be attending steadily to some one thing, we are really attending to its different aspects. The attention passes from one aspect to another in a series of sparks or jerks. For example, we may read the same book for hours together. But the topics are constantly changing. The ideas come in quick succession. And, *instead of one steady flame of attention we have thousands of intermittent sparks.*

By an active effort a man may fix his attention on some particular idea, but he cannot keep it there. If that idea forms part of a powerful *apperception mass*, the attention will flit from one of the constituent ideas to another, and in this way we may attend to the same *subject* for quite a length of time. Men of genius, whose minds contain peculiarly *rich apperception masses*, may in this way remain absorbed for days in the contemplation of the different aspects and relations of a favourite idea. But commonplace men of meagre education could not think of the same subject for more than half a minute at a time. A statesman might consider a question of statesmanship for ten hours at a stretch, whereas a ploughman might not be able to attend to it for ten consecutive seconds. *Fixing* the attention, then, as distinguished from merely *calling* it up, involves the formation of powerful apperception masses.

In the second place, *we cannot attend to many things at once.* This does not mean, however, that we cannot do two things at the same time. For instance, a painter may paint, smoke and carry on a conversation simultaneously. A housewife may knit, read, rock the cradle, sniff the cooking of the dinner, and listen for the foot-steps of her husband all at one and the same time. In this way we may do two, three, four or five or even eight things (as in the case of 'Ashtava-

dhanam *) if some of them are habitual, and so make no great claim on our attention. When they are not habitual, however, though attention may seem at first sight to be fixed on all at the same time, it really flits rapidly from one to another. We gain time by doing two things at once, when one of them is habitual or automatic. But we do *not* gain time when both make considerable demands on our attention.

Physiological Conditions of Attention

It is interesting to note the *physiological conditions of attention*. The nerves run from the sense organs to the brain as railway-lines. These form junctions, first in the lower centres, the grey matter of the Brain. From these junctions they run on till they once more converge, this time in the various sense-centres of the Brain cortex. And now, from both sets of junctions other lines run *out*, either directly, or indirectly to the muscles. At the beginning of our learning any subject or habit, outside stimulus takes a through ticket right to the cortical centres, and these centres send out motor impulses to the muscles. When the stimulus has grown habitual, the passenger seldom goes beyond the junctions in the lower brain-centres, the grey-matter. In other words it does not reach consciousness at all, but the Lower Brain-centres send out messages direct to the muscles without troubling the Cortex at all.

Now this arrangement has a great advantage. It greatly economises mental force. For instance, suppose you are just learning to play the harmonium. You have at first the labour of calculating which sound represents which note upon the key-board, and which particular finger is to be placed on which particular key. But as you continue to practise, your playing becomes more and more automatic, until at

* 'Ashtavadhanam' is the intellectual feat of attending to eight different things at the same time.

last many of the stimuli never reach the Cortex, never give rise to conscious attention, but are reflected from the Lower Brain-centres direct to the muscles of the arms and the fingers. In this way we are able to concentrate our attention upon the idea embodied in the music, and the best way of expressing it by our execution.

The Strength of Interest and Enthusiasm

We may add here a word of consolation for those who are naturally inattentive. What is important is a man's desire and passion, the strength of his interest. This is even more important than his attention. No matter how scattered may be the attention of the man, if he really *cares* for a subject, he will return to it constantly from his incessant wanderings. He will get more results than another person and more attention may be more continuous during a given interval, than in the case of the other person whose passion for the subject is not so strong or so permanent.

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CHAPTER IX

ATTENTION, PURPOSE AND INTEREST

Leading from Non-Voluntary Attention to Active Attention: Purpose and Interest

(1) PURPOSE

The Aim or End

We have seen that the task of the teacher is to help his pupils to rise from the stage of Involuntary Attention to the higher stage of Active or Voluntary Attention. It is very important that this should be done. For, Involuntary Attention means a lower plane of existence, one on a level with the higher animals. Man should be able to guide his conduct by considerations of remoter ends, without being content like the animals with the satisfaction of immediate needs.

Now, we know that children are attracted by movements or activities. They want *to do* things. And so, the effective step for the teacher to take will be to devise something for them to do, that is to say, to *give them some aim or purpose* to achieve.

An intelligent idea of the *aim* or *end* will lead to a consideration of the *means* calculated to secure the end. That is to say, the flow of ideas,—instead of being random and uncontrolled as in a reverie, or instead of being merely influenced by the force of the surrounding circumstances, as in the case of Involuntary Attention,—will get quite under control, the value of each suggested idea being tested in the light of the purpose that is kept in view. And now, it is this attention, where reflection *and deliberate choice* come in, that is the Active Voluntary kind of Attention.

The Plan

We shall next consider the practical points for the teacher arising out of this view of *purpose*. The teacher may bear in mind, that, for securing the active attention of the pupils, he should at the very commencement of the lesson place definitely before them the *aim* of the lesson. Unless they understand the aim, they will not be able to appreciate the *plan* of the master's lesson. They will, therefore, fail to see the significance of his statements or his questions.

It may be noted that it is not a desirable plan to adopt, except under very special circumstances, to keep the *aim* in the background allowing it to dawn upon the pupil's mind at the conclusion of the lesson. Nor is it desirable that the pupils should know only the *purpose* of the lesson each day. They should know not only *the purpose* and *the plan* of the courses of study of each subject but also of the class curriculum as a whole. A comprehensive view like this will help them a great deal to follow the teacher with intelligence. The choosing of a purpose, the controlling and regulating of the ideas with reference to the purpose, mean an effort of will which it may be difficult to exercise at the commencement. But once begun the progress will be easy afterwards. Ideas will soon cluster together in associated groups, so that, in the language of Herbart, *apperception masses* will come to be formed. And, with the help of these, the pupil will be able to turn round in their various aspects, so that he could give *continued attention* to the same central topic.

(2) INTEREST

What is Interest?

Next to purpose the important condition of attention is interest. Now, what is Interest? Interest is an attitude of mind that arises out of a relation between the mind and an object. The

term does not necessarily indicate a feeling of pleasure. It may sometimes imply a feeling of pain. For instance, when a child is interested in the construction of his toy-boat, he goes through a series of painful efforts. Again when we watch with interest the movements of a serpent we do so with a feeling of fear. So what the term *interest* really implies is a readiness to put forth the needed effort to realise purpose. Thus purpose and interest get united

Direct and Indirect Interest

We are said to be interested when we feel that a certain thing has a value for us. And things have a value for us either directly or indirectly. When the pupils are drawn to a subject for the sake of itself, their interest in it is *direct*. But when they attend to it simply in view of the requirements of a forthcoming examination, their interest in it becomes *indirect*, artificial or derived. It must be admitted that the interests of men in several directions are of this indirect kind. The teacher, when he cannot enlist direct interest should secure at least the other kind of interest by a judicious use of rewards and reproof, by exciting in his pupils a desire to win his good opinion and the esteem of the class-mates, a desire to promote the general advance of the whole class, and so on.

Combining the two conditions of *purpose* and *interest*, we may hope that the teacher,—by presenting new and varied relevant materials, by inducing in his pupils an expectation of an *end* or *aim* to be realized, by his looking at things from the pupils' point of view and thus securing their co-operation, and more than all by his genuine enthusiasm for his subject which would spread itself and extend to the pupils,—will be able to promote in his pupils' mind a *strength of purpose* and *of interest* so that his lessons will be valued in consideration

of remote *ends* and not for securing immediate gratification in the present.

A Source of Thrilling Joy and Self-activity

It is a common objection that by making lessons interesting the teacher is only weakening his pupil's moral fibre. The critics say that, if pupils are accustomed in the class-room only to such subjects as interest them, it is by no means an adequate preparation for facing the hard realities, the drudgeries of life. Pupils are made the victims of a soft pedagogy.

This objection is unsound. For, as we have already explained, Interest does not imply the absence of effort. It implies a readiness to put forth effort. It does not banish drudgery, but gives it a meaning and a value. Glover tells us how an *important interest transfigures a weary horror into a source of thrilling joy*. He tells us, for instance, how once chopping hay for the horses became a passion with him and his fellow-boys on account of the *interest* roused in them by a farmer who showed them a few pretty feats of strength and impressed on the importance of first developing the muscles of their arms. This is an excellent example which will be of particular interest for Babbe Education Teachers.

The error in the critic's view is due to the old traditional notion that pupils are liable to be taught by an external influence only,—an influence from without through compulsion and through a sense of fear of bodily punishment. This old view is wrong. A great deal has to be effected by the pupils' *self-activity*, and *Interest is only another name for self-activity*. If one should look into himself when he is interested he will be able to realize how active his mind is at the time. So by *arousing and maintaining his pupils' interest the teacher is only promoting their self-activity. The term interest implies the direction of activity.*

Types of Interest—Practical, Intellectual and Emotional

There are three *types of interest* represented by human beings, practical, intellectual, and emotional. (a) The interests of children are essentially practical. As we have already remarked their attention is drawn more towards movements and activities, more towards what one *does* than towards what one *says*. The error in the old teaching practice was that the children's interests were regarded as intellectual rather than practical. Hence the method recommended at the present day is that of exercising young pupils in occupations and games postponing the use of books. (b) The interest of a scientist may be described as intellectual. He aims at Truth and seeks knowledge for its own sake. (c) The ecstasy of a religious devotee, the ardent devotion and tenderness of a lover to his beloved, and the child's interest in acting in a drama, represent a high type of emotional interest.

Build up Apperception Masses

Teachers sometimes talk of creating an interest in a subject. But they cannot do it. All they can do is to *build up apperception mass, of which interest will be the invariable accompaniment.* They can, in fact, direct and not create interest.

The teacher's ambition should be to develop in his pupils all kinds of interest. In premature specialization there is a risk of one or other of these interests being ignored. The teacher should try to widen his pupil's interests and systematize them. There cannot be better friends of man than his higher interests. The ideally educated man is the man of many-sided interests. But it is not enough to have a number of interests. The interests must be of the right sort. "Our choice of subjects must be such as will co-ordinate our activities with those of the civilization around us." "People must acquire interest unless they are to live by appetite alone."

And, for rousing a permanent interest the Apperception Masses for that concerned subject should be formed. Unless the Apperception Masses are there, it is vain to expect sustained interest. That is why it is so supremely important to begin the formation of these Masses of Apperception while the mind is still fresh and young.

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CHAPTER X

FATIGUE AND ITS REMEDIES

Fatigue is a fact of decreasing competency to do work. In other words it is the increasing inability to do work. It should not be confused with boredom which is distinct from it. Boredom appears earlier than fatigue and increases at a more rapid rate. It is a lack of desire to do work, an aversion from attending to it.

Fatigue Centres

The experimental work on the physiology of fatigue centres around the three problems of the fatigability of (a) the muscles ; (b) the nerve-trunks ; (c) the reflexes.

(a) Fatigue of the Muscles

It is common knowledge that the performance of muscular work leads to fatigue. If, for example, we lift a heavy weight above the head repeatedly, a state is soon reached when the muscles of the body refuse to obey the mandates of the will. We say then that fatigue has set in. In schools muscular fatigue is brought about by excessive physical exercise, or faulty position in sitting and standing for a long time. When continuously stimulated the elastic muscle loses its elasticity temporarily and refuses to work. Some waste products are produced in the body and their presence exerts a poisonous influence.

(b) Fatigue of the Nerve-Trunks

Under the ordinary conditions of stimulation a nerve fibre cannot be fatigued. When an impulse passes through the nerve, some electrical and chemical changes take place.

But the energy consumed by the impulse in its passage through the nerve is exceedingly slight.

(c) The Reflexes

A spinal reflex under continuous excitation or frequent repetition becomes weaker, and may cease altogether. But the reflex, when tired out by stimuli at a particular spot, is easily obtainable by stimulation two or three centimetres away. That is to say, if one out of the innumerable synoptic connections that connect *each sensitive area with a common nerve-trunk* running to the muscle, becomes fatigued, the others are still fresh and may play their part in causing the reflex movement to take place. That is why spinal reflexes recover very quickly from fatigue, acting in this respect, in marked contrast to muscle. But they are, however, the most susceptible to fatigue.

“Of the three structures, muscles, nerve-trunks, and nerve endings (synapses), therefore, the nerve-endings are the most susceptible to fatigue. Like the fuses in an electric circuit they are the most vulnerable part of the system, but are also the most easily repaired.”

Kinds of Fatigue

Fatigue is usually divided into Muscular Fatigue, Sensory Fatigue and Mental Fatigue. These divisions are, however, artificial. For, sense organs are always connected to muscles via the central nervous system, and therefore, it is not possible to say where the fatigue centres.

Physiological experiments show that the chief seat of fatigue lies in the synoptic connection of the central nervous system, with secondary seats in sense organs and muscle plates. The peripheral ends of neurons (sense organs) are somewhat easily fatigued. For example, we quickly become insensible to odours and tastes, owing to the fatigability of

our olfactory and taste cells. And also, certain phenomena connected with vision have been attributed to the fatigue of the *rods* and *cones* of the *retina*.

Common practice distinguishes between Mental Fatigue and Bodily Fatigue. The former is referred to the nervous system. The latter is referred to the muscles. But it should be noted that these two forms of fatigue are closely associated. It is impossible to experience either of them in pure form. Especially does Muscular Fatigue, through its waste products, tend to pass over into Mental Fatigue. For example, a five mile walk is not the best immediate preparation for hard intellectual work. And it is also true that prolonged mental exercise may cause Muscular Fatigue, although it is difficult to demonstrate it.

Causes of Fatigue

There are three main causes of fatigue :—(1) The Exhaustion of the energy-producing compounds ; (2) the presence of toxic waste products ; (3) lack of Oxygen.

(1) Exhaustion of Energy-Producing Compounds

The exhaustion of the energy-producing compounds in the body, especially in the muscle-fibres and in the cell-bodies of the neurones, is one of the causes of fatigue. The nutriment of the body, which is absorbed by the blood, is carried to all parts of the body and utilized in the building up of bodily tissues and in providing a store of energy in the form of highly complex, easily decomposable chemical compounds in the movement-producing cells of the body. Thus the muscle cells of the body are stored with a supply of such compounds.

When a nervous impulse passes into the muscle a part of these compounds breaks up, the rapid decomposition providing the energy for the contraction. In the same way a neuron,

especially in the cell-body, contains a stainable material (chromophilic substance) which supplies the energy of the nervous impulse. If the stimulation of the muscle or the neuron is prolonged, a stage is reached when the available supply of these compounds is exhausted. A state of fatigue is reached, and the parts affected will not function until rest has allowed more of these compounds to accumulate. In the case of the muscle much time is necessary, whereas in the case of the neuron a short time only is necessary.

The exact chemical composition of these compounds is as yet unknown. But it is known that these are exceedingly compound and decompose with ease.

(2) Toxic Waste Products

It is the effect of waste products upon the synoptic nerve-endings which produces most of the observable phenomena of fatigue. When a muscle is exercised waste products or toxins are formed. These toxins are poisonous and their presence causes the symptoms of fatigue. Masso, a scientist, injected the blood from a dog excessively fatigued into a normal dog and thereby caused symptoms of fatigue to appear in the second animal also. Further, it is noticed that if a fatigued muscle is perfused (that is, washed by forcing a fluid through the blood vessels) with 'Physiologic salt solution', the fatigue disappears, as the waste products are thus washed away. It is interesting to notice that one of these waste products is Carbon Dioxide (the other two being Lactic Acid and Acid Potassium Phosphate).

The elimination of these fatigue substances from the body is effected primarily by means of the circulation of blood and lymph, and secondarily, by means of the lungs, skin and kidneys.

(3) Lack of Oxygen

Lack of Oxygen is another cause of fatigue. The decomposition of the energy-producing compounds of the body cannot take place without the assistance of oxygen carried by the red corpuscles of the blood. The presence of oxygen is also necessary for the conduction of energy in a nerve.

The removal of fatigue is certainly accomplished in part by oxidation. As a matter of fact the Lactic Acid is finally oxidized to CO_2 and water and eliminated by the lungs. Hence any impairment of the oxygen supply, or, what amounts to the same thing, any increase in the amount of waste products needing oxidation, leads to fatigue. The primary phenomena of muscular exercise, namely, a quickening of respiration, and an acceleration of the heart beat, are probably due to the body's increased need of oxygen.

Fatigue in School

The fatigue in school may be either Muscular Fatigue or Mental Fatigue. The Muscular Fatigue is brought about by excessive physical exercise or faulty position in sitting and standing for a long time. Mental Fatigue is brought about by want of good ventilation or prolonged hours of brain work, or sometimes by the heat of the day.

Inattention, and sunken eyes, dragging gait, drooping head and severe head-ache are some of the symptoms of fatigue in children.

Remedies for Fatigue

(a) Good Seating Accommodation

We have seen that Muscular Fatigue is brought about by faulty position in sitting or standing. So equipping the class with comfortable seats goes a long way in reducing

fatigue. It often happens that children come walking a long way to the school. If possible, such excessive physical exercise should be reduced.

(b) Proper Exercise

Sometimes fatigue is caused by want of proper exercise. Suitable exercise is a relief to mental fatigue as it helps sending the waste products out of the brain quickly.

(c) Supply of Oxygen

We have seen that a good supply of oxygen is necessary for the decomposition of the energy-producing compounds of the body and also for the conduction of that energy in a nerve. So it is of extreme importance to see that class rooms are well ventilated. Very often the distressing conditions of a class room are absolutely uncomfortable for children to give their best attention to their work. If we subject children to such conditions, their attention will be distracted from work, they feel easily fatigued, and their health seriously suffers. So we shall be wise to make school room conditions as comfortable as possible for the pupils, and especially should we pay attention to the circulation and movement of the air. I do not see, in particular, any reason for neglecting to use School Garden and Shady Trees for class purposes. It is a silly superstition that our schools have not lived down yet viz. that classes should be held in class-rooms only.

(d) Sleep

Nature's sovereign remedy for fatigue is sleep. In this state of rest, opportunity is given for replenishing the supply of energy-producing compounds and for the elimination of the waste products by oxidation or otherwise. The taking of food, especially sugar preparations, in the afternoon interval, hastens recovery from fatigue, as do also

certain refreshing drinks. But, if the fatigue is of a localised mental kind, such as is normally produced by school tasks; the remedy may be the substitution of another activity. Inattention of children in school is nature's way of changing a mental operation which has produced a temporary fatigue.

Some children need a great deal more sleep than others, either because they fatigue more easily and rapidly or because they are slow to recuperate or because they have not formed the habit of getting proper rest while they sleep. These perhaps are the causes for some children requiring twice as much sleep as others.

(e) Avoidance of Boredom

What troubles pupils, particularly in the afternoon, is not fatigue but boredom. If teachers could devise exercises for the afternoon sessions which enlisted the interests of their pupils, they would find that children could do them quite well, even though they be difficult.

In elementary schools it is customary to place Arithmetic in the first morning periods and to reserve such subjects as Singing in vernacular for the afternoon periods. It is quite probable, however, that the way subjects are taught has more effect than the content of subjects. Some teachers are certainly more fatiguing than others, or at least more boring. And it should be remembered that boredom may be just as effective in reducing the output of pupils as real fatigue.

Conclusion

Protection Against Excessive Mental Work

The human body is a wonderfully adaptive mechanism which, given a fair chance, will respond to demands made upon it in most surprising and gratifying ways. By securing favourable and hygienic and other environmental conditions, by proper arrangement of work and by interesting teaching,

fatigue and boredom may be minimised, and reduction of efficiency prevented.

Fatigue and boredom have, however, a biological significance. They serve as protective devices. This seems to be true of the physiological aspects of fatigue, especially the fatigue of the synoptic connection of the central nervous system.

It may be that fatigue also serves to give variety to behaviour, the unfatigued mechanisms getting a chance to act when the fatigued mechanisms cease to function.

Even boredom may play a protective part by providing the preliminary warnings of the danger of excessive mental work.

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CHAPTER XI

THE TRAINING OF MEMORY

What is Memory ?

Next to attention, memory enters into all forms of mental activity. But then, what is memory? Memory is the "power of retaining impressions and reproducing them." That is to say, it is the power of calling forth pictures or images of past experiences even after a considerable interval of time. This power of forming images is known technically as "Imagination". Imagination is of two kinds: (1) The Productive imagination, and (2) The Reproductive Imagination. This Reproductive Imagination is called Memory.

The Productive imagination combines, or in some manner, transforms the old experiences. In ordinary use, we refer by Imagination to this Productive Imagination. The Reproductive Imagination or Memory simply repeats old experiences almost exactly as they occurred.

In every act of memory there are four factors involved. (1) Retaining of old impressions; (2) Reproducing them; (3) Our Recognising the reproduced impressions as having been parts of our old experiences; (4) Locating them in a certain fixed time of the past.

The Band of Contiguity: The Laws of Association

The teacher has to do much with memory. For purposes of his pupils' acquisition of knowledge, he has to rely much upon their powers of memory. He must build up his new lessons upon the old, the knowledge they already had. He must therefore be acquainted with the conditions of efficient recall.

The law regulating Recall is this:—Two items A and B, if connected together in our attention, tend afterwards to revive each other. Objects or events occurring together in the same place or at the same point of time and even occurring together in close succession are ordinarily attended together. We thus associate together, for instance, this hall with its furniture and its occupants, a person with his form, features and character, an object with its parts and uses, a word with its meaning, and so on. We also associate together, day and night that succeed each other. We associate a blow on the skull and the resulting loss of consciousness that not merely succeed each other in time but are connected together as *cause* and *effect*.

In technical language the connected items named above are *associated* together by the bond of continuity. The question next arises,—seeing that an experience *A* must have appeared, not with *B* alone, but also in several combinations with *C*, *D*, *E*, etc., which one of its numerous associates is *A* likely to call forth at any particular time? The answer is—“*the recall is determined by a number of special factors.*”

Conditions of Efficient Recall

(1) Recency

The more recent our experience the more liable is it to be re-called. The word ‘book’ is likely to suggest ‘the book’ we most recently read.

This is, however, a factor on which the teacher cannot very much rely. It is indeed true that it is often helpful to a candidate to refresh his memory by a reference to his notes just before entering an examination room. This is quite a justifiable use of the principle of recency.

But it is also the principle underlying cramming. The teacher, however, may employ this principle with effect by

recapitulating at the close of every lesson emphasising the main points, which will form his starting point for the next day's lesson.

(2) Novelty

The next factor is "*novelty*". Everybody will admit the force of first impressions. First impressions are said to be the most lasting, and are therefore liable to be easily remembered and recalled. Attention abhors monotony. It is the new that attracts attention. We remember, for instance, in great detail, the events connected with our first coming into a certain locality. The new surroundings engage our attention.

This principle demands from the teacher sound preparation, a careful selection of materials and a proper mode of presentation. He should take care to present the new material in an old setting, and the old material in a new setting. When pupils are introduced for the first time to a new topic the teacher should make the work as agreeable as possible. If the first experiences should be unpleasant pupils may be altogether discouraged from a study of the subject.

(3) Vividness

By this is meant the clearness and the distinctness of the impression. We easily remember experiences which made a deep impression on us when they occurred, and which, therefore, excited our interest. An exciting incident, for instance, is easily remembered in all its details.

The teacher, therefore, should endeavour to secure vividness of impressions. He should not rest content with descriptions in mere words. But he should present actual objects, models, pictures and drawings. So far as the teacher's work is concerned, 'vividness' means 'emphasis', 'clearness', in presentation. The factor 'vividness' has reference

both to the manner of the teacher and the material of the lesson. The manner of the successful teacher is at all times earnest, alert and powerful. His speech is clear and emphatic. His material is carefully chosen. His statements and explanations are accurate, definite and concise. His illustrations are apt and illuminating. On the side of moral training, if a pupil has to be corrected for a serious fault it is necessary to make the experience of the correction as vivid as possible so as to be effective for the future.

(4) Frequency

The more frequent an experience, the more liable is it to recall. The word 'green', for instance, is likely to suggest not the last green object we saw but grass which we frequently see. More than the factors of Recency or Novelty, this factor 'Frequency' claims the teacher's attention. To secure effect, an impression has to be repeated and that frequently before the traces of the previous impressions disappear. The defect with the inexperienced teacher is his failure to realize the importance of *repetition*. His lesson is usually wanting in impressiveness. He should repeat his explanations. He should get answers to important points again and again in various contexts, and should *recapitulate* at every important stage in the progress of every lesson. Repetition with Attention is the basis of the formation of habits. Repetition thus is the most useful instrument in the hands of the teacher.

(5) Appropriate General Attitude of the Mind

The factors already mentioned, all of them concern with the past. The conditions of the *present* also determine the recall. The general attitude of the mind in the present is often an influencing factor. If, for instance, we are in a joyous mood we are liable readily to recall our previous joyous experiences. If we were occupied with a scientific

discussion the word 'proof' will suggest one set of ideas. If we are preparing a book for the press the same will suggest quite a different set of ideas.

The teacher, therefore, in order to render his lessons effective, should arouse in his pupils the *required mental attitude*, the required mental background, with the cluster of ideas bearing upon the topics of his new lesson. The preparation step of Herbart is only a means of securing this special factor.

(6) **Established mental attitudes**

Not merely the mental attitude at the given moment, but also our established mental attitudes in general, influence the recall of the past. This is the basis of the Doctrine of Apperception. A person's established interests i.e., to say his Apperception Masses, illuminate new ideas that enter the mind. The teacher, therefore, should endeavour to form as many useful associations as possible, so that for every new material of instruction the necessary mental background can be made available.

Errors to be Avoided

(1) **Avoid Random Talk**

We have now done with the details of the 'Principle of Contiguity'. A great caution has, however, to be exercised in employing this principle in carrying on a lesson. The unskilful teacher may easily be led to waste his time if he is not on his guard. One topic may easily lead on to another and the whole lesson might become a series of random talks. Hence the need for a definite aim for each lesson, so that the several suggestions may all contribute to the fulfilment of the definite aim. There should be an underlying purpose both when a single lesson is planned, say, for a period, and a whole course of lessons is planned for a

term. Ingenious introductions had better be avoided. They are instances of the wrong application of the Principle of Contiguity. What are the kinds of stones that you know? This is a question intended to get the answer 'Touchstone'. This is an example of irrelevant wandering.

(2) Distinguish between Real Causes and Accidental Conditions.

Another error to which the Principle of Contiguity is likely to lead is the mistaking of accidental circumstances for the real causes. All omens and superstitions belong to this class of errors. The teacher should guard against the Pupils' falling into this error by analysing complex situations and making clear to them the relations of Cause and Effect. It is *the search for causes* that distinguishes the scientific from the unscientific mind.

Laws of Similarity and Contrast

In addition to (1) The Law of Contiguity, there are two other laws that regulate recall of old experiences,—

- (2) The Law of Similarity and
- (3) The Law of Contrast.

If *A* and *B* are similar to each other in essential respects, they are liable to revive each other as when a portrait reminds us of the original. All poetic images, all scientific generalizations that sum up similar instances, all cases of Analogy, are illustrations of the Law of Similarity.

Again, not similar things alone, but *Contrasts* also suggest each other,—light and dark, wealth and poverty, giant and dwarf, and so on. These considerations lead us to the practical position that to cultivate his pupil's memory the teacher should form relevant and valuable associations by way of *contiguity, similarity, and contrast*.

The employment of the *Direct Method*, for instance, is a means of Association by Contiguity of an object, an action, or situation with the corresponding expression.

So also is *Dramatisation*, when it comes from within and is not simply mechanical.

All *illustrations*, pictorial or verbal, all comparisons and contrasts, all associations brought in by the teacher in his expositions are instances of the principles of *similarity* and *contrast*.

Different Types of Memory

We may distinguish five different types of memory :—

(1) *Immediate memory* helps to hold ideas only for a short time. This is useful for teachers and lawyers, as they should hold a large number of facts for a short time.

(2) *Permanent memory* holds for a long time. Children have this.

(3) In *Desultory memory* there is great retentiveness. Facts stick to the mind and are efficiently recalled even though there is very little arrangement of ideas and facts.

(4) *Rote, verbal or mechanical memory*. This is the parrot-like repetition of words without knowing their meaning. Sometimes learning by rote is distinguished from learning by heart. In learning by rote the sequence of words alone is remembered, while in learning by heart the matter is so assimilated and associated that it becomes part and parcel of ourselves. Algebraical formulae and definitions in science need sometimes be learnt by rote. Beautiful passages from literature which express noble thoughts in choice language like beautiful little pieces of poetry may once in a way be learnt by heart by the pupils. But too much of either of these is undoubtedly very bad and create disgust in the pupils.

(5) *Logical or Rational Memory* does not reproduce words but gives the sense. The secret of this memory consists in the capacity to form many strong associations of ideas.

Forgetting

Forgetting subserves a good function in the economy and efficiency of mental life. If every bit is remembered, such a memory is a hindrance to effective living. The experiences that one comes across every day are innumerable. And one should forget the unimportant ones and remember only the others.

Forgetting is a defence mechanism guarding the mind against the intrusion of experiences which would be burdensome and cause it pain and discomfort. That is why pleasant experiences are generally remembered longer than unpleasant experiences. It is good both for the teachers and the pupils to cultivate the *art of forgetting non-essentials.* "True learning is really judicious forgetting."

The practical lesson for the teacher is that he should not burden the minds of his pupils with unnecessary and unimportant details. The teacher should further emphasise the important points and slur over the unimportant and unessential ones.

Chief Points to be Borne in Mind by the Teacher

(1) Organize pupil's knowledge

The chief point to be borne in mind is that the pupils' knowledge should be organized into a system of connected experiences. The main difference between the teaching methods, old and new, consists in this. In the older methods attention was paid to disconnected items. Dates

in history, facts in geography, were more or less mechanically learnt. Under the present day methods emphasis is laid upon the *relations of facts* to each other and to the *general principles* underlying them. In the teaching of English poetry, for instance, the older method adopted a piecemeal treatment, word after word, line after line, being separately dealt with. Whereas under the new method a whole passage is read through two or three times, the *central idea* is grasped and the *details are arranged in their proper places* around the central idea. Experiments have established that the present day *complete method* leads to very much better results.

In associating together the contents of a whole passage or a number of connected events in history or facts in geography the pupils should be trained to distinguish the *essentials* from the *non-essentials*, and the *pertinent* from the irrelevant. Some people lack the power to grasp and give expression to the *main essence* of a subject. They cannot, except by repeating even the most petty details, report to others the substance of what they have read or what they heard. The teacher should see that his pupils exercise their discretion in the *selection* and *arrangement* of their materials. He should discourage his pupils from reproducing wholesale from the books. He should get them to vary the order of topics and to give expression to them in their own words.

(2) Appeal by Way of Many Senses

Another important point for the teacher to bear in mind is that there is no such thing as a general power of memory. It will be more appropriate to speak of memories. We know in common experience that some have a good memory for words, some for ideas, some for faces, some for colours, and so on. Different people are capable of forming

more easily and accurately different kinds of imagination. With some the visual imagery is very strong, with some others auditory imagery, with others still motor imagery. The teacher should, therefore, appeal by way of as many senses as possible. He should in addition to his talk *show objects*, pictures, models, and should *write and draw* and get his pupils also to do the same so that the different impressions may prevail with his pupils according to their natural endowment.

(3) Avoid Fatigue

In exercising his pupils' memories the teacher should avoid fatigue. The older theory regarding memory is that in cases of default in recall different parts of the brain were exercised from those that were concerned in the case of the original experiences. That theory has been exploded. The present day theory is that *both in the case of the original experiences and in the case of their revival the same parts of the nervous system are exercised*, the strongest proof of this theory consisting in the *tendency of ideas to act themselves out*. Great caution has to be exercised by the teacher when he makes his demands upon his pupils' power of memory ; for the conditions of any individual's memory are limited by his inherited nervous constitution.

Conclusion

By way of Conclusion we may note that *the training of memory consists in useful and pertinent associations being effected*. The common notion that memory is very strong in children is erroneous. The remark applies to verbal memory which is exhibited by children when they are able to recite their language lessons. *The power of rational or logical memory which alone is worth having, properly speaking, improves with*

age. As the individual grows older he is able to comprehend things more and more effectively and he systematizes his knowledge. Knowledge thus codified and arranged, makes further acquisitions easy. It economizes mental work.

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CHAPTER XII

IMAGINATION AND ITS CULTURE

What is Imagination ?

Imagination is the name given to that higher power, which, without simply repeating old experiences more or less exactly as they occurred, combines, or in some manner, modifies them so that the resulting *mental picture* is something altogether new. When, for instance, with the help of descriptions, and relying upon our own past experiences, we form a mental picture of the Sahara desert or the Niagara falls, we are exercising the power of imagination. In all cases of *constructive mental work* this power of imagination is exercised. It may be added that the exercise of this power is limited by the actual experiences that we have gone through. It is impossible for us to imagine anything wholly new.

Wrong Notions regarding Imagination

There are two wrong notions prevailing as regards imagination :—

(1) It is urged, in the first place, that it is a peculiar endowment possessed by the gifted few, and as such it is a power that lies outside the range of the teacher's activity. This is not correct. There are two kinds of constructive work that have to be distinguished. The superior kind of work is performed when a genius like Newton *discovered* the Law of Gravitation. There is another kind of constructive work in all cases where *knowledge is acquired*. And as we shall see presently, Imagination has greatly to be exercised in acquiring knowledge which everybody has got to do. To put the same in technical language, we must draw a distinc-

tion between Receptive Imagination and Constructive Imagination. The former kind is well within the scope of the teacher's work.

(2) Another wrong notion about Imagination is that it is opposed to the end of Truth and Reality. If, indeed, we should indulge in an uncontrolled play of imagination we are liable to be led away from Truth. But it must be remembered that the world owes all discoveries of new truths to bold strokes of imagination. It must have been a bold flight for Newton's Imagination to have detected a similarity between the fall of the apple and the movements of the heavenly bodies. The point is—we should not surrender ourselves to undue imagination. When, for instance, we have preconceived ideas, our imagination is too liable to lead us to see just the points against us. These tendencies to over-imagination should be checked. Paradoxical, as it may appear, the best way of cultivating the imaginative activity is to regulate and control it.

Factors of Imagination

Every form of Imaginative activity involves three factors :—

(1) In the first place, it is clear that there should be a good Stock of Images being the result of actual personal experiences. The greater the number and the variety of these experiences, the more numerous are the possibilities of combinations of them, i.e., to say, the more abundant are the opportunities for the exercise of Imagination.

(2) The second factor in Imagination is an element of Feeling. The scientist is actuated by an earnest love for Truth, while the poet, the painter, or the artist, is influenced by a feeling of love for the Beautiful.

(3) In the third place, every form of Imaginative activity involves some amount of Originality.

Points for the Teacher with regard to the above Factors

The teacher who wishes to cultivate his pupil's imagination should secure the co-operation of the above three factors.

(1) Laying by a good stock of Images

In the first place; the pupil should be allowed ample *opportunities for laying by a good stock of Images*. Almost every lesson may be made to serve this purpose. Geography lessons afford most scope for this. The free use of Globes, Models, and Pictures, must furnish a good number of concrete images. The number of these may be increased by *Excursions* to parks, museums, waterworks, factories, etc. The books in use for Geography lesson might be such as abound in lively descriptive readings. Pupils may be encouraged to make collections of *Specimens* available in the neighbourhood. They may also be encouraged to make contributions to the School Museum illustrating the activities of life.

Pictures appearing in illustrated Magazines, accompanied by verbal descriptions, may be collected for reference as occasions arise. The *Cinema* may be made part of the equipment of every school. It will afford opportunities for developing the imagination of the pupils as it can effectively exhibit natural phenomena and human activities in their *very concrete forms*.

In all *Science* lessons the pupils have opportunities for the exercise of imagination. To observe a science apparatus and then to recall the details, the various parts and fittings, or to examine a plant under the microscope and then to recall correctly all the details concerning it, is only exercising the imaginative activity.

Again in *History* lessons, when we follow the lives of great personages through the various incidents connected with their

career and when we feel with them and sympathise with their sorrows and rejoicings, we are exercising our imagination.

Again, in the *English* and the *Vernacular* lessons there are ample opportunities to deal with *pictures and illustrative drawings*. In *dramatizing*, in *reciting* good passages of poetry or prose, we are only forming images and transforming them into newer ones.

Every *Composition* exercise is a Constructive piece of work. For, from our store of materials we have to make a careful selection just of those details that relate to the subject of Composition, and we combine the selected details into a connected form. It will be a useful exercise to get pupils to write *imaginary auto-biographies* of articles like a watch, the sponge, care being taken, of course, that the sketches are consistent with facts.

Drawing is another school exercise by which the pupil's images may be rendered vivid and clear and their stock increased.

It will thus be seen how abundant the teacher's opportunities are to help his pupils in forming a good stock of Images. It is a common practice in some elementary schools to send out newly admitted children into the neighbourhood of the school so that they might observe the surroundings and form accurate perceptions of the objects available and secure correct images of them and connect them with their appropriate names. The contents of children's minds are extremely vague and the words they use do not raise in their minds the precise image or ideas. Sending them out to make observations of the neighbourhood will secure definiteness and accuracy as regards their sense-perception and their images.

All this means that the teacher will have to be at some pains to train the pupil's imagination. It is commonly believed that children are very imaginative. What the children are capable of cannot be properly called imagination. The more correct name applicable in their case is *fancy*, a wild and uncontrolled kind of Imagination. Children confound facts with fiction and *vice versa*. What are usually regarded as lies on the part of children are only instances of an exuberant play of their fancy. As knowledge increases, however, and experience widens, the tendencies of wayward fancies are checked and the children's expectations and beliefs are brought more in conformity with actual facts. The teacher should, therefore, endeavour to regulate and control his pupils' fancies so that they may gradually clarify their mental pictures. Before commencing a new lesson let the teacher satisfy himself that the pupils are in possession of the images likely to be introduced in the course of the lesson. So much for the first factor.

(2) Train Pupils in Scientific and Aesthetic Imagination

The second factor in Imagination is a *feeling*, which we have indicated to be *Love of Truth* in the case of scientific imagination, and *Love of the Beautiful* in the case of poetic or artistic imagination. The teacher can lay the foundations of an agreeable feeling if he starts his work with his pupils who possess the requisite images and if he can make his instructions interesting by lively anecdotes, episodes, biographies, travels, vivid accounts of natural phenomena, scientific stories, moral tales, select pieces of poetry to be recited, and in fact if he can call forth vivid pictures now of objects, now of countries, now of great men, so that the pupils' minds might dwell on the pictures with delight as on the contents of a museum. Neat and artistic school surroundings

and classroom decorations may help to refine the pupils' tastes and lay the *foundations of aesthetic culture*.

(3) Encourage Originality

The third factor involved in imagination is *Originality*. Children, for instance, do not like perfected toys so much as puzzle pictures, for, in the latter, scope is afforded for the exercise of their constructive talents. When the teacher requires his pupils to make an intelligible sentence from a miscellaneous list of words, when he requires them to employ words and phrases newly taught in illustrative sentences of their own, when the pupils follow intelligently his descriptions of striking scenes and events, when he sets intelligent questions that require in answer not a mechanical repetition from the book read, but information carefully selected and combined from their old lessons, in fact, in all cases where the teacher helps the pupils to apply old knowledge to new instances he is exercising the pupils' imagination.

Imagination and Moral Training

The exercise of the imagination is a useful instrument not merely for purposes of intellectual training but for moral training as well.

As remarked already, in dealing with Historical events or the career of Historical personages the teacher may get his pupils to enter fully into the situation and participate in the joys and sorrows of the persons concerned. In fact the teacher should place before his pupils ideals of conduct and of duty. The appreciation of an ideal, and seeking appropriate means to achieve the ideal as far as possible, means the exercise of the imaginative activity. The teacher should impress upon his pupils how good work always results from an attempt to realize an ideal.

There are a set of people who insist upon the value of facts so much that they will teach only facts and consider everything else outside the range of hard facts as valueless. This is too extreme a view to be adopted. *Facts* may indeed be very valuable so far as they go, but one should not, on that account, ignore the value of *ideals*. *To insist on facts alone to the neglect of ideals implies an inadequate appreciation of human nature, its needs and its longings.* Absence of ideals is sure to lead to a loss of elevation in the general aim of life. The teacher should place *noble ideals* before his pupils and inspire them to acts of lofty ambition.

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CHAPTER XIII

APPERCEPTION AND ITS USE IN TEACHING

What is Apperception ?

An idea presents itself for the first time to the mind. It effects an entrance into consciousness, and it is there acted upon. Herbart holds that the action of the mind upon this new idea is influenced—indeed practically determined—by the mass of ideas already present. This action is known by the name of *Apperception*. As Dr. Hayward says, “Apperception is the process of interpreting some new fact or experience by means of our previous knowledge.”

Let us try to unfold the meaning of Apperception. You may rear a cat, a dog, and a monkey, each on a diet of milk. The assimilative machinery of a dog changes the milk into the tissues of a dog. The assimilative machinery of a monkey changes the milk into the tissues of a monkey. In each case the diet is the same, the assimilative process is on the same lines. It is the internal constitution of the creature assimilating that changes milk into monkey, cat, or dog. Now, call ideas the food of the mind. And then if you feed the different minds with the same mental diet, you will obtain very different results. Prof. Adams says, “Since apperception means the acting upon a new idea by all the ideas present in the mind, and since the number and arrangement of ideas in no two minds are exactly alike, it follows that no two persons can have precisely the same idea of anything.”

Examples of Apperception

Some interesting examples to illustrate the above point are given below.

(1) An astronomer perceives an eclipse of the sun. The perception is acted upon by the contents of his mind. And

the resulting apperception is an interesting exemplification of natural law that brings with it no particular disturbance of the emotions. On the other hand a savage perceives the same object. The perception is acted on by the contents of his mind. And the resulting apperception is the idea of a sun swallowed by the demons. In both these instances the idea that enters the mind, viz., the appearance of the eclipse, is the same. But the contents of the mind being different, the resulting apperception is different also.

(2) A cruel man and a man of gentle nature see a horse ill-treated. In the first case the perception is acted upon by the brutal ideas present in his consciousness, and the resulting apperception causes heartless laughter. But in the second case the result is altogether different.

(3) A boy who has just been reading ghost-stories sees in the moonlight a wisp of mist. The perception is assimilated by his mental content. And the resulting apperception is an image of a ghost. On the other hand, a man who has just been told that he is threatened with bronchitis perceives the same wisp, and apperceives it as a menace to his breathing apparatus.

It may be of interest to note that a new idea or incident leaves no time to be patronized or influenced by the contents of the mind. Sometimes it completely changes the contents in the mind and presents a new change. That is the effect of all great discoveries, like Copernican theory, Darwin's theory of Evolution, etc. A revolution takes place and therefore the transformation in the moral and religious life of a man or a group of men by some incident.

Application of the Doctrine of Apperception to the Practice of Teaching

Whenever we interpret an experience there will result two kinds of mental activity. Suppose it is raining. In the first

place we appreciate the sensations of sound or sight and understand that it is raining. This simple act of the mind is known as Perception. In this I interpret an experience in the light of similar single experience in the past.

There is another and a higher form of mental activity when a single experience in the present is acted upon by a whole set of past experiences, or we may even say, by the whole contents of the mind. For example, the same phenomenon of the monsoon rain, which must have been *perceived* alike by a number of persons is, however, likely to arouse in the mind of one of them, who may be a farmer, the thoughts of the coming harvest, while it may fill another mind with anxious thoughts about the safety of a friend who is on his or her voyage to ~~America~~. This second mental process is the process of *Apperception*.

The point in Apperception is that any new impression or idea entering the mind is liable to be acted on by its appropriate circle of ideas which form part of the contents of an individual mind.

The above is an admitted psychological fact. It, therefore, becomes imperative with the teacher that he should *secure the necessary group or groups of ideas*. In other words, he should *secure the necessary mental background*, before he can expect his pupils to receive any new ideas.

The application of this Doctrine of Apperception to the practice of teaching has been worked out in detail by Herbart and his followers. The details make up what we know as the Herbartian steps, which will be considered in Part III of this book.

Awakening of the Self-Activity of the Pupils

The theory of Apperception points to even a more important principle than those that have been mentioned above, *viz.* the principle of awakening *self-activity* in the pupils. It tells

us that the pupil will be able to grasp an idea, understand it and make it occupy a permanent position in his knowledge only when he correctly *assimilates* it. It is, therefore, essential for the teacher to *stir* the mind of the pupil so that the pupil's own activity may strengthen and develop his own mind. In other words, the condition of the pupil should not be that of a mere passive listener but of an active participator. And, this is to recognize that what is essential in education is *not mere instruction from without* but the *gradual unfoldment* of the pupils' mind *from within*.

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CHAPTER XIV

THE EDUCATION OF FEELINGS, WILL AND MORAL INTELLIGENCE

Kinds of Feelings

Three kinds of Feelings may be distinguished :—(1) The Simple Feelings; (2) The Complex Feeling or Emotions; (3) The Sentiments. As the education of Feelings is a vital part in the development of the pupil's mind, we shall note some important features of these three different kinds of Feelings.

(1) The Simple Kind of Feelings

These are the pleasant and the unpleasant feelings, the feelings of agreeableness and disagreeableness that come upon us when we see a beautiful or an ugly object, when we hear a melodious or a discordant note. These are known as Sense-Feelings, *i.e.*, Feelings excited in us by our Sense-Perceptions.

(2) Complex Feelings or Emotions

The second group of Feelings is of a complex kind involving an exercise of the intellect brought on, we may say, by our apprehension of objects. For example, the sight of a ferocious animal fills an individual with the emotion of fear, because he knows what consequences may overtake him. A person is filled with remorse because he knows that he has misused his opportunities. Or again he is filled with righteous indignation because he knows that some punishment is wrongly inflicted. Such higher Complex Feelings which are the result of the influence of intellectual ideas are known as the Emotions.

Diffused Excitement is the Mark of Emotion

There is one important respect in which these higher feelings, *viz.*, the Emotions, differ from the first group of Simple Sense-Feelings. When, for instance, we experience the Feeling of Fear or of Anger, we have necessarily accompanying it a peculiar excitement which spreads almost throughout the nervous system. Such a diffused excitement is a mark of every Emotion.

Every Emotion has its own Bodily Expression

Another characteristic of Emotion is that it has its own peculiar mode of bodily expression, and is followed by ~~its~~ own appropriate activity. For example, Fear is accompanied by a tendency to run, Anger is accompanied by a tendency to strike. In fact, Emotional and Instinctive bodily tendencies are parts or aspects of one and the same life-process.

(3) Sentiments : The Highest Group of Feelings

The third and the highest group of feelings is known as that of Sentiments. As we gain more and more experiences we are liable to fall into certain *established modes of Feelings*. These conservative tendencies are known as Sentiments. One of the earliest sentiments that the child develops is his love for his parents. By this we do not merely mean to say that the child has from moment to moment a certain affectionate regard towards them. But we refer to a more or less fixed attitude in the child. And this fixity or a certain stability is what is characteristic of all Sentiments. These Sentiments are gradually formed. Even this subsequent modification will not come about easily or quickly.

Point for the Teacher with the Regard to Training of Emotions

Do not Suppress Feelings: Regulate Them

At this point we should note a common mistake. This mistake consists in supposing that feelings are for the most part to be *suppressed*. This suppression of feelings is an injurious process. What ought to be done is that these feelings should be *regulated and controlled* so that they may develop along agreeable directions.

No feeling as such is undesirable. No feeling therefore need be suppressed. It is characteristic of the feelings of children that they are brief, and that they are sudden and intense. The best thing for the teacher to do with regard to the simpler feelings of his pupils is to appeal to moderate and quiet pleasures.

Induce agreeable emotional frame of mind

As regards the next higher development, the teacher should try to *induce an agreeable emotional frame of mind* in his pupils by securing favourable conditions. These favourable conditions are secured by means of hygienic arrangements as regards space, accommodation, lighting, ventilation, arrangements for securing convenient postures and agreeable positions in the class-room. The school should provide also a neat graceful compound, class-room decorations, as these also induce an agreeable emotional frame of mind. Moderate physical exercises induce a healthy bodily tone. The introduction of music in the lower classes is an excellent means by which a healthy and cheerful tone of the pupils' mind may be secured. More than all these things it is the teacher's liveliness, cheerfulness and buoyancy of spirits that can excite agreeable feelings in the pupils and therefore interest them in their work.

Two powerful Emotions the Teacher has to deal with

Let us now take up two of the emotions that the teacher has to deal with, and see the lines on which he should endeavour.

(1) Fear

The teacher should see that the pupil's mind is always free from the emotion of Fear. From time immemorial the fear of punishment has been a chief instrument of discipline in the class-room. The teacher should endeavour to create in his pupils not the fear of punishment, but the fear of wrong doing, especially the fear of causing pain to others and to those for whom they should have regard or sympathy. They should be taught to abhor ignoble and unworthy things. If it be impossible to avoid punishment entirely, the occasions for resorting to it should be as few as possible.

The risks involved in administering punishments are of very serious nature. In the case of pupils of strong nature the result may be that they rebel. Some natures may become callous and get hardened. In the case of weaker natures there may be a suspension of their activities for a time or there may be a permanent damage done to their enthusiasms. In all cases there is bound to be interference with the harmonious relationship that should exist between the teacher and the pupil. At all times, therefore, the teacher should endeavour to exercise as far as possible a genial influence over his pupils.

(2) Anger

It is quite essential that the teacher should always keep his temper. It is said that temper is to the teacher what the voice is to the singer. By his *impartiality, kindness and*

sympathy the teacher should avoid all occasions for any anger in his pupils.

The *social affections* of his pupils should be cultivated. They should be taught to control their anger. One of the best endeavours of the teacher should be to excite in his pupils *a sense of righteous indignation* against wrong-doing in general. When this is found in the pupils, it will be a great help to the teacher in maintaining the discipline of the class, for the offenders, if any, will be suitably dealt with by their comrades themselves as a result of this noble feeling.

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CHAPTER XV

THE UNCONSCIOUS IN EDUCATION

Psychology of the Unconscious

Psycho-analysis is one of the most important developments in recent Psychology. Psycho-analysis is the Psychology of the UNCONSCIOUS. The discovery of the Unconscious in the human mind is the main point of difference between the new and the old approach in Psychology. The Conscious and the Unconscious are two different levels of the same Mind and belong to the same totality of the Mind. Like a pond, there are the surface and the depths in the Mind; and thoughts and feelings are constantly coming to the surface and receding back again into the depths.

The contents of the Unconscious have a great part to play in influencing the life and behaviour of the individual. The submerged ideas crop up from the depths of the Unconscious and carry the Mind in some direction in an apparently inexplicable way. They have all a force of their own. These *suppressed ideas* and also *repressed desires and wishes* often realize themselves in *dreams*. Such repressed ideas, desires and wishes are called by Psycho-analysts as *Complexes*. They set up abnormalities in the mental outlook and behaviour of the individual. The Psycho-analyst brings out these lurking Complexes within the healing range of the Conscious and thus helps the individual in getting rid of them.

The uses for the Teacher of his knowledge of the Unconscious

(1) Correct understanding of the Child

The teacher, with a knowledge of the Unconscious, will be in a position to understand his pupils better and guide them

on correct lines. If the teacher really wishes to know the child, to be his friend and guide, he cannot afford to neglect the large reservoir of the child's experience in his mind, though he may not probe into his mind in an obtrusive way, which will spoil the delicate relationship of pupil and teacher.

(2) Correct Treatment of the Delinquent Child

The teacher's knowledge of the Unconscious is also of immense use in tracing cases of misconduct to their real origin in the child's mind and thus in taking appropriate measures to deal with such cases and to reform the delinquent child. In this connection we wish to invite the attention of the teacher to the recent excellent book, *Problems of Child Delinquency* by Maud A. Merriam.

(3) Avoidance of Repressions and Complexes

Unwholesome repressions and the consequent Complex Formation are the tendencies of a school regime of the old order in which restraints on the child's freedom are innumerable. The strain of stringent examinations and tests, the anxieties of over-stimulated competitions are very injurious to the young mind. They tend to bring about Complexes of various kinds. A teacher that knows Psychiatry enough can arrange the work of the pupils better than other teachers and win the gratitude of his pupils for years to come.

(4) Avoidance of Thoughtless Sarcasms

A teacher well-informed in the developments of recent Psychology will also be able to avoid thoughtless sarcasms and meaningless taunts which chill the enthusiasm of the pupils and set them against his work and also bring about injurious Complexes in themselves. Sympathy and understanding and a capacity to come down and identify himself with his pupils and understand their aspirations and their internal troubles, are the characteristic marks of a teacher

that has access to the psychological make-up of the large region of the Unconscious of the Mind of his beloved youngsters.

Education of the whole Mind

The teacher may better have a first-hand contact with his own *Unconscious* and its wonderful mechanisms. It is only then that he can have the ability to interpret his pupils' whole personality. The Unconscious has come into being on account of the *repression* which takes place through the *conflicts* between the claims both of outer and inner demands and of opposing internal impulses. It is only when it is possible for such repression to accomplish itself harmoniously, without the undue creation of disintegrating *complexes* and with adequate *sublimation*, that the individual can fulfil himself. So it is the education of the *whole mind* that can really assist an individual in all stages of his progress.

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TEACH YOURSELF PSYCHOLOGY—BY W. E. SARGENT, Chapter VIII.

THE UNCONSCIOUS IN ACTION AND ITS INFLUENCE UPON EDUCATION—BY MISS BARBARA LOW. (University of London Press.)

MENTAL HYGIENE (for Community Nursing)—ERIC KENT CLARKE Chapter III. (University of Minnesota Press, Minneapolis).

CHAPTER XVI

EDUCATION OF THE WHOLE MIND: PSYCHOLOGY OF REPRESSION, COMPLEXES, FANTASY-LIFE AND SUBLIMATION

Key to unlock the doors of Personality

Our educational systems and ideals of the past have been mostly directed towards the *Conscious* Mind alone, its manifestations and its workings. But, luckily for the children in the world there have been now and then persons who, through their own initiative genius, have been able to recognize and interpret the *Unconscious* of the child. In the past there were such persons as Rousseau, Pestalozzi, Froebel and Tolstoi; and among contemporaries there are Madame Montessori and the blind-deaf-dumb pitiful genius, Helen-Keller. Though in actual educational practice there has not been sufficient recognition of the Unconscious Mind as the dynamic force in the human being, yet there is scarcely any doubt that the understanding of this is the key whereby to unlock the doors of personality. And it is for this reason that we say that a knowledge of the Unconscious is an essential part of the equipment of the educator.

Repression Process

The realization of the Unconscious Mind and its influence upon Consciousness is the first necessary equipment of the Educator. As this Unconscious is largely the creation of Repression, a knowledge of the Repression Process is of utmost importance. "Repression is that process by which a person unconsciously *rejects* and selects psychic experience through the urge of civilized cultural impulses opposing the profoundest *primary instincts*, which later operate on the

basis of pleasure principle.” The Repression Process does not imply the *actual disappearance* of the seemingly rejected experiences or ungratified primary instincts, these primary instincts being the ego-instincts, the self-preservation instincts and the sexual instincts. The Repression Process only necessitates the disappearance of these instincts from the *conscious* psyche. The ‘rejected’ lives on in the mind of the person buried away from our direct apprehension, but evincing itself either by its dynamic influence upon consciousness or by emerging into consciousness innumerable adaptations, modifications, and disguises. Some of these many adaptations are destructive to human development and some are creative of the highest human manifestations like love, family, church, government, drama, dance, music, science etc.

Mechanisms of Sublimation

A knowledge of the Mechanisms of Sublimation is another requirement on the part of a successful Educator. Sublimation is fundamentally an Unconscious process, which may be helped or hindered by the external environment. In the past our educational schemes have hardly anything concerning what is necessary and appropriate with regard to the stages of sublimation-development. But in the future it is to be hoped that our educational schemes will be worked out with this in view. It is important in the first place that the teacher himself notes his own Unconscious attitudes. If he is unable to sublimate satisfactorily his own fundamental instinctive desires, he will not be able to help the furthering of sublimation in his pupils ; rather, he may contribute to its hindrance.

Interdependence of Intellectual and Emotional Factors

An understanding of the interdependence of the intellectual and emotional factors and the subordination of the former to the latter is the third essential equipment of the Educator. There are important Emotional factors in the human mind

which are often only dimly recognized, sometimes even quite unknown to the individual. Man's Intellect, his reason, his judgment, and his critical powers, are conditioned and perpetually remoulded by the concealed Emotional factors.

Child's Fantasy-Life: A Mechanism of Wish-Fulfilment

Man's Fantasy-Life is one other of the implications of Psycho-analytic knowledge. Fantasy plays a vital and continuous part and has many manifestations in the life of every human being. It is always the expression of the Unconscious. But it manifests itself *consciously* to the fantasy-maker as a *wish-fulfilment*. This is true of the fancy of a tiny child that he is a 'Chakravarthi', a lordly ruler ruling a great empire, as well as of the fantasy of the Creative Artist who is able to make out of the raw material of his fantasies a finished product of the greatest objective value to mankind. It is in this aspect of wish-fulfilment that Fantasy plays a very important part in the understanding of the human mind. And, it is only by recognition and understanding of the fantasies of the child that the child's mind can be understood and correctly appreciated. The child lives the larger part of his early life in his world of fantasy. This is so because his immature development creates in him a continuous stream of wishes which the external world and his own inner lack of power combine to thwart. "If we would know what manner of creature he is, we must be able to interpret the secret cipher of his unconscious wishes."

Fantasy : A Compensatory Activity

Fantasy is not only the expression of unfulfilled wishes, it is also a compensatory activity. Its function is to enliven the pain of unfulfilled desires. For instance, the myth-makers, who fantasied the Happy Isles of the Blest were expressing their desire for eternal youth and strength and were realizing great comfort in its contemplation. Similarly the restless

man of the world of struggle and turmoil finds great peace in the deeper levels of his mind, in the contemplation of his turning towards the Mother again, the haven of peace and effortless existence. That is how fantasy-life is a compensatory activity. It is much more so in the case of the child, who is just an immature, delicately-poised, unstable entity. In the case of the child life-development would be impossible without the compensatory force of fantasy. In fact, whether child or adult, we have all to retain some fantasy throughout life. But we should not, however, exaggerate the use of fantasy in life. For a refusal to realize and face the real objective world will spell ship-wreck.

Fantasy as Explanation of Unknown

There is another aspect of Fantasy which is also important. This is its function as explanation of the unknown and non-understood. The human mind is always full of its own problems and questionings. This is the inevitable mechanism of the mind. The human mind must ask these questions and must answer them in some form or other. Such answers are often provided by fantasy-material to some degree throughout life and particularly to a great extent in the beginnings of life. Great questions regarding death, the origin of life, sex-processes, impulses to love and hate, beauty and ugliness, constantly stir the child's mind. These incessant questions must be replied to. They are mainly answered by the child's own fantasy. His fantasy-answers are his way of coming to terms with these problems. Sometimes they are fraught with fear and suffering for him and sometimes they bring him satisfaction and delight.

Individual Treatment in Education

All that has been said above regarding fantasy-life has a bearing for Education. It implies certain items of equip-

ment for the teacher and certain duties that the teacher, rather the Educator, has towards his pupils :—

(1) In the first place, it must be the work of the Educator to understand what part Fantasy plays in the child's inner life. Otherwise the Educator can deal with a fraction only of the child before him.

(2) In the second place, the Educator should help the child gradually to live down the pleasure-life of fantasy for the life of reality. Such a thing is impossible unless the Educator is able to comprehend the child's fantasies and their significance to the child's life.

(3) Thirdly, the Educator should supply whenever and wherever possible adequate reality-explanations in a manner in which the child can understand in the place of his fantasy-explanations.

Through Education the Educator should carry out such a work. This will be a great help to the child in his individual development, for this will enable the child to overcome many inhibitions and obstacles to his self-expression in life. Thus there is a great necessity in education of grasping the individual's inner life. From this again arises another important consequence, *viz.*, the need for *individual treatment* in the field of Education and the ~~futility~~ of *mass instruction* for the young ones.

References.—

For authentic information regarding the points raised in this Chapter the teacher-reader of this book is invited to refer to the recent books, FREUD'S CONTRIBUTION TO PSYCHIATRY—BY DR. A. A. BRILL AND PSYCHIATRY IN MEDICAL EDUCATION—BY DR. H. G. EBAUGH AND DR. C. A. RYMER. MODERN CLINICAL PSYCHOLOGY—BY DR. T. W. RICHARDS, (Mc.Graw-Hill publications, Chapter XIII).

PSYCHOLOGY AND ART OF EDUCATION

PART II

THINKING AND THE BUILDING UP OF KNOWLEDGE

PSYCHOLOGY AND ART OF EDUCATION

PART II

THINKING AND THE BUILDING UP OF KNOWLEDGE

CHAPTER XVII

IDEATION OR THINKING

The Process of Concept Formation

The two activities of the Mind we have already dealt with have reference to the *concrete*. Perception deals with the concrete things themselves individually. Imagination is concerned with the images and pictures of these concrete things.

The third process of Ideation or Thinking deals with the *abstract*. Intellectual progress consists in an advance to the *abstract* from the *concrete* by way of the intermediate stage of the *images*. The simple product of this process is known as a *concept* or an *idea* or a *general notion*. This concept is the result of a process of comparison of a number of similar images, of taking a mental grasp of the essential points of resemblance amongst the images and of excluding the points of difference.

For example, take the concept or idea of *table*. We pass in review mentally a number of images of the different kinds of tables we have seen.. We leave out of account the points of difference and then when we mark off the chief points of resemblance, the totality of these constitute our concept or the general idea of the *table*.

An Old Mistaken View

According to an old theory, the three processes, *viz.*, *Perception*, *Imagination* and *Ideation* represent three distinctly marked off stages, one succeeding the other. This is, however, a mistaken view. In every act of *Perception*, there is *Imagination* involved, and there is also some small element of *Reasoning* concerned, so that the individual at any stage is capable of exercising at once all these three forms of mental activity, although the extent to which these powers are exhibited may differ in different situations.

It follows from what has been noted above that it is erroneous to suppose that the interests of children are confined exclusively to the concrete. Even in the most elementary lessons given to them they should be expected to *compare* and to arrive at results from their acts of comparison. Even in such a simple process as of noting how many objects there are on the table, the child counts the books, the pens and the pencils that enter into his calculation leaving out of account the features that distinguish them from one another.

The Process of Thinking

To *Think* is to compare and contrast. This process of *comparing* and *contrasting* involves two factors, *viz.* (1) *Analysis*, and (2) *Abstraction*. In comparing one object with another we have to scrutinise in detail the features of both of them. This is *Analysis*. Next we have to make a selection of such of the features as have an interest for the occasion and separate them, so to speak, from the object, and hold them under our attention. This process of drawing away by our mind certain features of an object of study or investigation is called *Abstraction*. Further, every act of thinking involves the exercise of *Voluntary Attention*.

Children are not capable of the higher form of conceptional activity. Nevertheless, it may be taken for granted that they are capable of forming simple elementary notions. It must be admitted that their comparisons may not be effective and that therefore their concepts or general ideas are somewhat of a crude character. So the best way of educating children is to start with elementary ideas regarding any subject matter and introducing them gradually to more and more general ideas.

The merit of what is known as the *concentric* system of teaching consists in this fact, *viz.*, that the pupils are taken through ideas graded in complexity and bearing upon the same subject, so that the same topics are repeated in a number of courses, but dealt with each time from a more comprehensive point of view.

With these preliminary observations let us pass on to the next topic, the Nature of Knowledge.

Further information may be obtained from Chapter X of PSYCHOLOGY—BY DEXTER AND GARLICK, Chapter XII of EDUCATIONAL PSYCHOLOGY BY J. S. ROSS.

Chapter I of LOGICAL BASES OF EDUCATION—BY J. WELTON, Chapter I.

CHAPTER XVIII

THE NATURE OF KNOWLEDGE

Knowledge : The Interpretation of Experience

By Knowledge we mean the interpretation of Experience. To be more specific we may say that the term *Knowledge* implies that part of human thought which is true and which harmonizes with the facts of Experience. The interpretation of Experience may be different with different individuals. It may be different at different times even in the case of the same individual. Whatever these interpretations may be, in true Knowledge there is a *systematizing* of the details of Experience.

We know how in Perception we systematize the details furnished by way of the senses. Memory is possible only when our experiences have been systematized or connected together. The very essence of Apperception consists in grouping together of appropriate elements in our Experience. The process of systematizing is carried on a much larger scale when the thinking activity is exercised. Knowledge in the strict sense of the term is the result of this thinking activity.

We cannot apply the term 'Knowledge' to the contents of the mind of a savage. His mind is filled with mere beliefs and superstitions. He is under the sway, not of Reason, but of Fancy and the Emotion of Fear. Knowledge implies a spirit of inquiry, a careful investigation, the shifting of evidence. It, therefore, implies an accurate interpretation of experience, based upon acceptable evidence tested in the light of reason. The task of the teacher is to help his pupils to acquire knowledge of this kind.

Three Stages in the Acquisition of Knowledge by the Human Race

We may say that the Human Race has passed through three stages:—(1) The Wonder Stage. (2) The Utilitarian Stage. (3) The Scientific Stage. The primitive man was an absolutely ignorant individual looking in wonderment at the objects and the natural phenomena around him. Gradually, although he was not able to understand the characteristics and the conditions of the objects, yet he got quite accustomed to them and was able to *use* them for his own practical purposes. It was only after several stages in the advance of human knowledge that man became able not merely to explain natural phenomena but even to predict a future occurrence.

Three stages through which the Educator has to take his Pupils

Corresponding to the three above-mentioned stages through which the Human Race has passed in the process of the acquisition and building up of Knowledge, the Individual also has to pass through three different stages in acquiring knowledge. The Educator has to take his pupils through these stages. These stages are:—(1) The Stage of Precepts, (2) The Stage of Laws, and (3) The Stage of System. The stages, however, do not correspond exactly to the stages through which the human race has to pass. They represent only the general outlines of process.

In the earlier stages our Knowledge is confined to individual objects. Single Precepts, that is to say, the objects that we come to know of in the Early Stage are looked upon by us as almost *independent* of each other. When our knowledge advances we discover that these objects that appeared to be independent are in a way related to each other. It is only then that their relations are understood. Observations

of the conditions of these objects enable us to understand the changes that occur in them. In this way we work out a Knowledge of the Laws under which natural phenomena occur in our surroundings.

These General Laws represent the stage of the Sciences, every Science being a body of Laws relating to one department of Nature or of human Life and Activity.

Simpler Laws are next comprehended under more General Laws. In other words, we are next in a position to recognize the whole Universe as a well-organized system. When thus we are able to understand the several parts in their definite relations to one another, we have reached the highest stage in the acquisition of Knowledge.

The Herbartian Steps in teaching, which we study later, help the teacher to take his pupils effectively from the Concrete to the Abstract. As such, it may be referred to as a practical application of the lines of the three stages in the building up of the Knowledge of the pupils.

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INTRODUCTORY LOGIC—BY CREIGHTON AND SMART.
EDUCATION PROCESS—BY W. C. BAGLEY.

CHAPTER XIX

THE PLACE OF LANGUAGE IN THE PROCESS OF BUILDING UP KNOWLEDGE

What is Language ?

As we have already seen, Knowledge is our interpretation of Experience. This makes it necessary for us to have certain symbols which will help us to refer to the details of our Experience. Such symbols constitute what we call language. The crying of children is a language. The primitive man has the language of gestures. And then we have the language of the flag signals, of the trumpet call and the bugle sounds. But in these forms of language there is an amount of indefiniteness and uncertainty as to what they mean. Nevertheless, the most definite and effective system of language is that which is constituted by human speech. And the term, 'language' in ordinary use refers to the language of *speech* which man employs.

The Functions of Language

Man records his Experience in the language he employs. One of the first functions of language, therefore, is the *recording* of thoughts. By virtue of this function language acquires the other function of *communicating* thought. Language is not the means of recording and communicating of thought, it is likewise the means of recording and communicating feelings, sentiments and emotions. Writing and Printing are only the extended forms of these functions of language.

There is yet another and even more important function that language serves. It *stimulates thinking*. It is impossible to carry on the activity of thinking without the help of language of some kind or other. Speech exercises a great in-

fluence on thought. The power to employ words indicates that the individual has acquired the power to generalize. Employing appropriate words, for example, giving an object an appropriate name, simple as it may appear, is a very elaborate intellectual process. The object has to be examined by way of every one of the senses. The several features of the object have to be analysed and recognised. There is then the associating together of several elements separately considered. And lastly, bringing the entire object under this class or that, we then give to the object the name of the class to which it belongs.

Naming therefore is the next step after generalizing. We are able to hold together the several details that were considered in reference to an object by means of the single word-symbol. Were it not for the help of the symbol of a word, we shall have to be repeating all the details connected with an object every time with all the pains of the first effort.

We can have an idea of the help afforded by language if, for example, we take into account the numerous and complicated details which we are able to hold together by the help of the phrase, "The American Constitution". An important step, therefore, is gained when our thoughts become fixed with reference to corresponding words. When this definite step has been reached, there is a basis afforded for rendering further thinking possible. Words are, therefore, described as *thoughts crystallized*.

There are several names or words that are condensed records of the facts of history, commerce, education, politics, psychology and so on. A word that has been rightly chosen embodies, and therefore calls forth, a whole train of connected associations. We may well imagine the delight that persons feel when they have hit upon an appropriate name.

Development of Intelligence and Growth of Vocabulary

As intelligence develops and newer and newer and finer differences come to be appreciated we have our vocabulary of words increasing. We come to employ in appropriate contexts words different in their application but are allied in their shade of meaning. As regards the words that children employ, it may be noted that *names of persons, objects or things* come to be used first. It is a little later that the child learns the names of actions. It is at a still later stage that *adjectives* and *adverbs* come to be employed by the child. To refer to the quality of a person or of an action means the separating of it from the object or the action, which is a highly intellectual process of an abstract kind. It is still later that the *relations* between objects come to be perceived. The child may easily know the wall and also the picture. But to know that the picture is on the wall involves an abstract process of thinking.

A higher stage still is reached when the child can talk accurately about its experiences in the past which are not in the immediate present. And the highest stage is reached when the child is able to appreciate correctly when it hears other people talk about things which have not fallen within its experience. There is thus a close correspondence between Knowledge and Language, Speaking and Thinking. To *think* is to *speak low*. To *speak* is to *think aloud*.

Practical Points for the Teacher to Learn from the close Intimacy between Thought and its Expression

What is the practical lesson for the teacher to learn from this close intimacy between Thought and its Expression? This lesson is that the teacher should give his pupils ample opportunities to talk out freely. When they passively listen to the teacher, they may believe, and honestly too, that they

are following him in every detail. But when they are made to give their own expression to the matter taught, they will realize a number of defects and gaps in the thread. The constant practice in proper expression will stimulate the pupils' thinking activities, so that they can be depended upon gradually to do their thinking and speaking on proper lines.

From the beginning the teacher should take care that ambiguities and looseness of expression of any kind are avoided by the pupils. The caution against loose expressions being employed is very important because there is in the case of many words employed in a growing language a certain indefiniteness of meaning. We know how words in some cases get their application extended, while in other cases they are narrowed down. The flexibility of meaning and the application of words are, therefore, a matter of great convenience from the point of view of the language. The teacher must carefully guard against this flexibility in the meanings of words interfering with precise forms of expression. Some people would make every lesson in the class-room a language lesson to some extent.

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HOW WE THINK—BY JOHN DEWEY, Chapters IX, XIII.

INTRODUCTORY LOGIC—BY CREIGHTON AND SMART, Chapter I.

THOUGHT AND LANGUAGE—BY P. B. BALLARD.

CHAPTER XX

JUDGMENT

THE ANALYTICO-SYNTHETIC PROCESS
OF THE MIND

What is Judgment ?

A judgment is first a process of *analysis*. Some one experience only out of the experiences of the surroundings is taken into consideration for the time being. In another sense, judgment is also a process of *synthesis*. For example, a single experience, like that of a person walking, is analysed into its elements. This gives rise in the verbal expression of it in the statement, ' *A* is walking '. Thus judgment is a process of *analysis*. It is also a process of *synthesis*. For example, when I say, ' *A* is walking ', I have several details in my mind relating to *A* and numerous details regarding walking. Of these I select only two particular aspects in our judgments and unite them and say, ' *A* is walking '. Such a statement is called a *Proposition*. It is a statement in language of something affirmed or denied of something else.

Propositions.

The term ' Judgment ' is used with reference to the *mental act* of Judging as well as to the *product* of the mental act. The product, when expressed verbally, is technically known as a *Proposition*. In Logic all grammatical sentences are not called propositions. A proposition is a statement in which something is definitely *asserted*, either affirmatively or negatively, for acceptance or rejection by others. But in sentences like the interrogative and the exclamatory there is nothing definitely asserted. So they are not propositions.

In every Logical Proposition there are two parts. For example, in the proposition, "India is free", we have "India", that of which we speak, and again we have the fact of her being free which we declare of 'India'. Thus a logical proposition is therefore made up of the Subject and the Predicate connected by the word 'is' which is called the Copula'.

And further, in any proposition we may have the Predicate affirmed or denied of the whole or part of the Subject. Thus we have four propositional forms or types of judgment :

The Universal Affirmative : All S is P : A.

The Universal Negative : No S is P : E.

The Particular Affirmative : Some S is P : I.

The Particular Negative : Some S is not P : O.

Categorical, Hypothetical and Disjunctive Judgments

Three different types of Judgment correspond to the three stages that we go through in the acquisition of Knowledge. In the first place our Knowledge is made up of particular observed instances. When a number of instances come to our notice we sort them into several sets. Then, from an examination of their similar features characterizing each set we arrive at a General Law. When a number of Laws are grouped together and are regarded from a higher point of view, we rise to the higher stage of System.

In the first stage, for instance, we have a fact expressed in the Categorical proposition, 'The Godavary is in full floods'. We observe this phenomena from year to year and we conclude that rains swell the rivers. This we express in the Hypothetical proposition, 'If it rains in the West Coast, the Godavary is in floods'. This is the Stage of Law.

With reference to other rivers like the Ganges and the Brahmaputra we similarly arrive at another Law, *viz.*, that they rise in floods when the snow on the mountains has been melted. We combine both this Law and the above Law into one Law and express it in the Disjunctive form, *viz.*, 'The Rivers in India rise in floods either when there are heavy rains or when the snow in the mountains has melted'. Here we have a small *System*.

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INTRODUCTORY LOGIC—BY CREIGHTON AND SMART.

LOGICAL BASIS OF EDUCATION—BY J. WELTON, Chapter VI.

CHAPTER XXI

RELATIONAL THINKING : REASONING OR INFERENCE : THE PROCESS OF SYSTEMATIZING KNOWLEDGE

We have already dealt with two of the higher intellectual processes. We shall now take up the third and highest of them, *viz.*, Inference. The details mentioned about abstraction and concept-forming relate to the first process, *viz.*, the *Percept Stage* in the acquisition of Knowledge. The details regarding judgment relate to the second stage of *Law*. The third process, 'Inference', relates to the highest stage in which Knowledge is reduced to a *System*.

We owe all our knowledge to two sources, *viz.*, (1) Personal Observation, and (2) The testimony of others. In our personal observations, *i.e.*, our perception, there is a certain amount of reasoning involved. When we obtain knowledge from others we shall do well to test the accuracy of the information received in the light of acceptable evidence. Thus it follows that reasoning or inference enters into all our Knowledge acquisitions. It may also be further noted that Reasoning or Inference is the process by which we *systematize* our Knowledge.

The Inductive Process

When either from personal observation or from other sources we secure a collection of facts it naturally occurs to us to arrange and codify them, as otherwise it would be extremely difficult to hold them all together in the mind. We are, therefore, led to scrutinize the details of these several facts and arrange them into groups of items of similar character. When these separate sets of facts are examined more closely we are led to discern the Principle or the General Law under which all the individual facts might be included.

It may often take a very long way for such a comprehensive General Law to be grasped and formulated. When we start with a set of similar facts several alternative generalizations may suggest themselves to us as containing the entire range of facts. These will have to be verified by being worked out in their concrete applications. And then we take up that generalization which, for the time being, is found to accord most with the actual facts. Such tentative generalizations are known as *hypotheses*. And, that hypothesis which stands the test in every way comes to be called a *Law*. This process of inferring a Principle or a Law from particular concrete facts is known as the process of INDUCTION.

The Deductive Process

When with so much care we arrive at the General Law or Principle, we proceed to apply it to fresh cases as they arise, for it is possible that further instances may come under notice on account of which the whole conception may have to be modified or even rejected. Every new instance, however, to which the Law can be effectively applied confirms the validity and widens the application of the Law. This process of applying a Law to fresh instances is known as the process of DEDUCTION.

Knowledge is Fitting together Facts and Principles

These two processes of Induction and Deduction together help us in systematizing a number of connected facts. Facts have to be viewed in relation to the Principle or Law comprehending them; and the Law has to be recognized with reference to the facts included under it. The Facts and the Principle or Law make up *one whole system*; and the double process of Inductive and Deductive thought makes explicit the contents of that whole system. These two modes of interpreting Experience or Reality are technically said to

explain any phenomenon when we are able to refer it to the Law under which it is an instance, that is to say, to the System of which it forms a part.

The Aim of all Teaching

The aim of all teaching should be not simply to communicate individual facts, but to develop a System of connected Knowledge. We shall see that the first four steps of the widely accepted Herbartian scheme of teaching implies the Inductive mode of building up or developing a lesson, while the fifth or the application step adopts the Deductive method.

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PSYCHOLOGY—By R. S. WOODWORTH, Chapter XVI.

BASIC PSYCHOLOGY—By J. S. ROSS, Chapter VII.

HOW WE THINK—By JOHN DEWEY.

CHAPTER XXII

DEFINITION : THE MENTAL PROCESS OF FIXING THE ESSENTIALS

What is Definition ?

We have seen how the processes of Induction and Deduction help us to systematize our Knowledge of facts or phenomena. The processes of Definition, intensive and extensive, help us in systematizing our knowledge of objects. As our experience increases, we get to know a greater number and variety of objects. As in the case of facts, so in the case of objects as well, we are led to group together similar objects and to each group we assign a Name. Therefore the meaning of a Name implies two items, *viz.*, the several objects to which the Name is applicable (the Denotation); and secondly the common attributes or characteristics on account of the possession of which the objects become entitled to the name (Connotation). Now, the processes of fixing these two aspects of the meaning of a Name constitute the significance of the term, DEFINITION.

Fixing the Essentials

Strictly speaking the term, DEFINITION, is not merely the verbal expression of the meaning. It is really the mental process of *fixing* the meaning. It implies the process of eliminating the unessentials and crystallizing or synthesising the essentials in a definite and intelligible and brief form. What these essential attributes or characteristics are will have to be settled from time to time by competent experts. An expert's accurate definition is greatly in contrast with the vague and indefinite kind of definition that we generally adopt in daily life. Thus the framing of an accurate definition marks an advanced stage in scientific thought.

The Greatest Task for the Teacher

A definition, properly speaking, is arrived at a comparatively later stage in the systematizing of Knowledge. It is true that text-books usually begin with definitions and end with examples. But the teacher, in presenting the material of the subject he is teaching to the class, has to reverse the order of the text-book in most cases. He has first to begin with particular cases and examples and then proceed to enunciate the definitions at the end.

It will thus be seen, whether we systematize our Knowledge of facts or of objects, our success depends upon our perceiving points of similarity to the exclusion of the points of dissimilarity among the variety of facts or objects under investigation. So the greatest task of the teacher is to train his pupils to look for points of resemblance and difference. In other words, the teacher has to train his pupil's powers of discrimination.

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PSYCHOLOGY AND ART OF EDUCATION

PART III

ART OF EDUCATION: TEACHING METHODS

PSYCHOLOGY AND ART OF EDUCATION

PART III

ART OF EDUCATION : TEACHING METHODS

CHAPTER XXIII

FEATURES OF A GOOD METHOD OF TEACHING AND THE HERBARTIAN STEPS

Knowledge consists in interpreting experience. The function of the teacher is to help his pupils in their interpretation of natural phenomena and human activities. If the teacher's help is to be effective, he must first have a thorough knowledge of the subjects he has to teach. In the second place, he should know what knowledge his pupils already possess. And, in the third place, he should adopt an *orderly procedure*, according to a psychological plan of apperception and sustenance of interest and attention. It is this plan or orderly treatment that is referred to when we speak of *Method* in teaching.

The following are the characteristics of a good method :—
(1) A good method aims at a definite purpose. (2) The minds of the teacher and the taught co-operate. (3) There is a good economy of time and energy. (4) The matter is well arranged according to a psychological plan. (5) And the value of the method is judged by the results.

The following are among the media of instruction,—communication by means of oral instruction, communication with the help of text-books, source books, and also by an appeal to concrete objects, models, pictures, diagrams, maps, charts etc. Whatever the media adopted, the method that, in the main the teacher should follow, is that set forth in the Herbartian Scheme—the Method of Induction-Deduction.

Double process of Induction and Deduction

The reducing of a number of individual facts to a General Law is known as the process of Induction. When the General Law is arrived at we proceed to *apply* it to fresh cases as they arise. Every new instance to which the law can be effectively applied confirms the validity and widens the application of the law. This process of applying a law to fresh instances is known as the Deductive Inference. These two processes of Induction and Deduction help us in systematizing together a number of connected facts. Facts have to be viewed in relation to the Law comprehending them and the law has to be recognised with reference to the Facts included under it. The Facts and the Law make up one whole System and, the double process of Induction and Deduction makes explicit the contents of a whole System. They are technically said to *explain* any phenomenon when we are able to refer it to the Law of which it is an instance, that is to say, to the System of which it forms a part.

The aim of all teaching should be not simply to communicate individual Facts but to develop a System of connected knowledge. The first four steps of the Herbartian Scheme deal with the inductive mode of building up or developing a lesson, while the fifth or the application step deals with the Deductive method.

A successful method of teaching should employ all the aspects of consciousness. In addition to the Cognitive processes of Induction and Deduction, the psychological factors of Interest and Attention should be also taken account of. A good teacher has the ability to utilise all these factors together. He does not always adopt the same stereotyped methods, but invents novel features in his teaching.

We have seen that the chief point in Apperception is that any new impression or idea entering the mind is liable to be acted on by its appropriate circle of ideas which form part of the contents of an individual mind. This is an admitted psychological fact. It, therefore, becomes imperative with the teacher that he should *secure the necessary group or groups of ideas*. In other words, he should *secure the necessary mental background* before he can expect his pupils to receive any new ideas.

The application of this Doctrine of Apperception to the practice of teaching has been worked out in detail by Herbart and his followers. The details make up what we know as the Herbartian steps.

THE HERBARTIAN STEPS

First Step : Preparation

Every piece of new knowledge should be connected with the old. This is the one essential principle to be borne in mind by the teacher. So then the first step in effective teaching is to prepare the pupil's minds to receive the new lesson. Their minds are likely to be pre-occupied with what occurred in their homes or on their way to school. And so, if the teacher should begin his lesson abruptly it is certain he will not be followed by his class. All mental pre-occupations, therefore, should first be avoided and the *mental*

attitude that is needed for receiving the new lesson should be induced. This preliminary step of clearing the ground is known in the Herbartian scheme as the Preparation Step.

This step need not occupy long. By means of skilful questioning or with a brief introduction the teacher should be able to secure the necessary mental background. The Preparation Step need not always be with reference to just the previous day's lesson. Any part of old knowledge which has a bearing on the new lesson can be effectively brought in. Let the introduction to the new lesson be straightforward and plain and brief, not learned, long-winding or ingenious. A definite statement of the *aim* should form a distinct part of the Preparation Step. Let not the aim embrace a number of different items. Let it be concentrated upon one or two definite points so that it might be easy for the pupils to see how every step in the lesson is directed to the fulfilment of the aim.

Second Step: Presentation

The other four steps in the Herbartian Scheme relate to the actual imparting of new knowledge. To understand the significance of these steps the following remarks will be helpful :—

(a) Knowledge worth having should be in the form of *general laws or principles*, each law or principle comprehending a number of similar details. Disconnected pieces of information, however valuable, have not validity of laws, and cannot, therefore, constitute reliable knowledge. If knowledge worth having should be in the form of laws, how are these laws to be arrived at from a number of concrete instances. So, the *starting point* in the communication of all knowledge should be *familiar concrete instances*.

(b) The starting point in all knowledge is “Concrete Instances”. An examination of the several instances which we may

collect together as the result of observation or experiment will enable us to *classify the several instances into a number of groups*, each group being composed of a number of similar instances. A closer scrutiny of each group will reveal the underlying Law or Principle governing them all.

(c) When we have thus arrived at Law we have reached the second stage in our progress in knowledge. The Law having been arrived at, we may apply it to fresh cases as they arise; and when we find the application leading to results which are in conformity to actual facts, the validity of the Laws is better established and its scope is widened. *This application to new cases is the third step in our progress in knowledge.*

Taking these three steps together it may be said that we *progress from the Concrete to the Abstract, proceeding on to the Concrete* once more. The next four steps of Herbart are based upon this principle.

In the second step, *presentation*, details of new matter are presented to the pupils in the *concrete*, with the help of actual objects, models, pictures, diagrams, and blackboard drawings. The presentation should be adequate in quality and suitable in quantity to the time spent and to the level of the class. The presentation should be clear and not crowded with too many details. If the subject-matter should be complicated it may be broken up into a number of logical units. The points included under the portion taken should be logically arranged so that the progress from point to point may be effective. When the subject-matter is presented to the pupils, analysed in *concrete* details, the teacher may then group the details together into a *connected whole*.

Third Step : Assimilation and Association

Before this process of synthesis is undertaken, the teacher may, by skilful questions, remind his pupils of other details with which the points of the lesson may be compared,

contrasted, or otherwise *associated*. The Comparison, the Contrast and the Association will render the new points more precise and widen the circle of similar instances, so that the discovery of the General Law or Principle may be made all the more easy. Hence along with the *Presentation step we have to carry on the process of Assimilation and Association*. It should be remembered, however, that it is only for purposes of clearness that we separate Assimilation and Association as the third step different from the second step, viz., Presentation.

Fourth Step: Formulation or Generalization

When the general Principle has come to be discovered we *formulate* it in words. This formulation is the fourth step, known as Generalisation. This should be in clear and definite terms and should correspond to the Aim set forth at the commencement of the lesson.

Fifth Step: Application

The last and fifth step consists in getting the pupils to *apply* the general Principle to new cases. One proof of the pupils having appreciated the new lesson lies in their *ability to apply practically* their knowledge to new instances. Very often in the class room too little time is devoted to this step. The pupils should be allowed some time towards the close of the lesson to *adjust* their ideas and to *express* them in their own words.

Merits of the Herbartian scheme

Since the Herbartian steps are expected to be applicable in a general way to all lessons, whatever the subject matter, the steps should be called 'the Five Formal Steps'. The great merit of the Herbartian scheme is that under it knowledge is imparted in the most natural and effective manner. (1) The pupils are prepared to receive the new in-

formation. (2) All irrelevant ideas are kept out. (3) The pupils' expectant attention is aroused. And, (4) The systematic progress from step to step maintains the interest of the pupils and ensures the success of the lesson.

Four kinds of Lessons

It should not be supposed that the five formal steps of Herbart constitute a scheme which can be uniformly applied in the course of every lesson. We may distinguish four kinds of lessons—(1) Those that are intended to *increase or widen* the pupil's knowledge, which may be called Lessons of Information. (2) Those that are intended to deepen their knowledge and help them to arrive at general truths. These are known as Inductive Development Lessons. (3) The Deductive Lessons whose object is to enable the pupils to apply the knowledge imparted to them as in Mathematics or Grammar in which they are made to work out exercises *applying* the principles taught. (4) Lessons intending to enable them to acquire *constructive skill* as in Reading, Writing, and Drawing lessons.

The Herbartian Steps will have to be variously applied in the above mentioned four kinds of lessons. They are fully applicable in the case of Sciences, Mathematics and Grammar lessons, in which starting with a number of instances, comparing and contrasting them with others, we arrive at a General Law and extend the scope of it by applying it to fresh instances. Even here, if the subject matter should be complicated, we may not be able to go through all the steps in a single lesson. Perhaps the generalization and application steps may have to be postponed to the time of giving an additional lesson.

With regard to the lessons in which acquirement of skill and not of Knowledge is the aim, the scheme cannot be said to be applicable at all. Further, the procedure depends

upon the level of the pupils. We shall have to be occupied more with the Preparation Step in the case of the junior pupils, and with the Generalization Step in the case of the Senior pupils. After all, teacher can only be sure of three steps. He can prepare his pupils' minds, he can present new materials, and he can help them to apply the Knowledge he has helped them to acquire.

Sometimes a new idea or an event may not have sufficient time to be patronized or influenced by the contents of the mind. But in due time it may completely change the contents of the mind and present a new change as in the case of religions or moral conversion of an entire life by an incident or a sudden appreciation of an ideal or a view-point. That is the kind of effect of all great discoveries like those embodied in the Copernican theory, in Darwin's theory of Evolution etc.

But it is undoubtedly a hard job to enter into the pupils' mind, see into their inner workings, and pick up the processes that may lead up to the generalization step. This is not very much with an average teacher's control. It is this that makes the *art of teaching* such a difficult piece of work. The Herbartian Scheme emphasizes only the teacher's part of the work. But what about the part of the pupils? It should be remembered also that the pupils should get ample opportunities to co-operate with the teacher and contribute to the progress of the lesson.

It must, however, be recognized that undoubtedly the Doctrine of Apperception and the Five Formal Steps are among the valuable contributions to the Theory and Practice of Education.

THE EFFECTIVE CONDUCT OF THE LESSON

The teacher has to attend to three important things in a successful conduct of a proposed lesson to a class :—

A. Orderliness of the Class.

B. Preparation and Presentation.**C. Impressiveness.****A. Orderliness of the Class**

(1) To avoid disorderliness in the class, see that everything which is necessary for the lesson, like maps and globes, crayons and registers, are kept at hand previously ready for use.

(2) Occupy a suitable position in the class and talk in a fair and decisive tone free from all suggestion of timidity.

(3) The teacher should never keep the class unoccupied. It should always be kept occupied with plenty of work.

(4) The teacher should not allow the slightest sign of disorder or in-attention.

B. Preparation and Presentation

The teacher should go to the class well-prepared, with plenty of matter. A beginner may even address an imaginary class before he actually meet the class. Thus thorough preparation is required of the teacher.

With regard to the Presentation of the lesson, the teacher should adopt a definite *plan*. The subject matter should be lucidly presented ; the main points of the lesson should be carefully picked up and coherently arranged. By means of questioning and eliciting answers, expositions and explanations can be carried on with clearness and definiteness, precision and effectiveness. But the start should always be made with a clear idea of a definite *aim*.

C. Impressiveness

Impressiveness can be secured by appeal to imagination and concrete examples as well as by varied repetition and careful revision. To secure the *depth* of impression, four features are essential. (1) Novelty : The teacher should use

new material in old setting and old material in new setting.

(2) Frequency: If the lesson is difficult it is particularly necessary to repeat and to revise. (3) Vividness: An ample introduction and apt illustrations are necessary. Parallel passages and illustrative sentences, objects and pictures are also to be plentifully used. (4) Recency: Effective use of Black Board is extremely necessary. The success of the lesson finally depends on the teacher's ability in entering into the contents of the mind of the pupil which is something like Robinson Crusoe on a lonely island. And this is the greatest of Arts known to man.

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CHAPTER XXIV

THE METHOD OF EXPOSITION AND THE CATECHETICAL METHOD

The Method of Exposition

In the method of Exposition, the teaching consists in the teacher's telling or giving information. This method is adopted with advantage where a general introduction to a new subject is necessary, where an exciting Scene or Event has to be described, where the teacher feels a need to impress a wholesome Moral Lesson.

Cautions for the Teacher

The teacher has to be very careful in employing this method. He better observe the following cautions :—

(1) Intellectual Sympathy

The teacher must be in '*intellectual sympathy*' with his pupils. He should know on what previous knowledge of his pupils he can rely. He should know also the words and the expression at the command of the pupils in regard to his subject. The teacher may be using the same words. And yet, there will be room for misunderstanding. It is the experience that a man has had that gives to the words he employs the meaning he attaches to them. Unless the teacher can realise what particular words *mean* to his pupils, he is to be said that he is talking above their heads. The need for this caution is all the greater because throughout the exposition the pupils are merely passive.

(2) Slowness in Exposition

The second caution that the teacher need take is that he should be slow in his expositions. Attention, as we know, is a process of adjustment. And so the pupils must be

allowed sufficient time to follow the teacher intelligently. There should be no rapid talk. There should be no unnecessary verbiage. The teacher should see that he excites the interests of his pupils and sustains their interest and attention by following a connected order of topics in his expositions so that the telling may be as effective as possible.

(3) Logically Connected Form

Effective telling is an important part of teaching. Even when a lesson is conducted for the most part by means of questions and answers the teacher will have to connect together the several pieces of information elicited in the course of questioning and answering, and present them to the pupils in a logically connected form.

The Catechetical Method or the Method of Questions and Answers

‘Catechetical’ comes from the Greek word, *Katekhetes* which means oral teacher. This method is the method of questioning and answering. It is called also the Dialectic or the Socratic method.

Merits of the Method

This method avoids the defects of the Exposition method. The teacher is able to know definitely by means of questions what previous knowledge his pupils possess. He is able to suit his lesson in the several stages of it, especially as regards its matter and quality, to the level of his pupils. He is also able to estimate the pupils’ progress at the end of the lesson. This method also avoids the defect of keeping the pupils passive during the lesson. On the other hand, the pupils are helped to acquire knowledge by their own self-activity, which is stimulated by the questioning. And more than all, when this method is adopted, there is free

co-operation between the teacher and the pupils, and so there is real life in the lesson.

One form of this question-answer method is known as the *Socratic method*. In the form in which Socrates adopted it, this method will not be of much use in the class-room. His was a negative kind of method. His special object was to expose the pretensions of self-opinionative men. But the teacher in the class-room has to impart useful information, and so he cannot use the Socratic method.

Three kinds of Questions

There are three kinds of questions : (1) The *preliminary questions*, which constitute the preparation part of the lesson. (2) The *teaching Questions*, which constitute the presentation step and which, though interrogative in form, are really an effective means of imparting new information. Hereunder come questions intended for eliciting. (3) The *examination or recapitulation questions*, which are intended to find out how far the new lesson taught has been understood and followed.

Characteristics of good Questions

Good questions possess the following qualities :

(1) Questions should be *simple* and *direct*. They should be expressed in the interrogative form. Elliptical questions should be avoided as far as possible.

(2) Questions should be *definite* and *clear*. Each question should admit of one substantial answer. The “indefinite question” is the serious fault of an inexperienced teacher. It bewilders the pupils. It makes them doubtful of their own powers and encourages random answers. ‘What is there in the centre of Ireland?’ This is an Example of an indefinite question. For the same the definite question is,—‘What is the name of the marshy land in the centre of Ireland?’ In a

new lesson particularly such questions are confusing. The teacher should avoid shrouding the lesson in mystery by such questions. 'What is there in my hand?' This is another indefinite question. For the same, the definite question would be,—'What name would you give for the stone in my hand?'

(3) Questions should be *adapted to the capacity of the pupils*.

(4) Logical *sequence* is a mark of good questioning. There should be a continuity, each question arising out of a previous answer.

(5) The questioning should be brisk and rapid. It shows the alertness of the teacher. The pupils are more responsive to a brisk, active and alert teacher.

(6) The question should be expressed in the *teacher's own words*. He should make himself independent of the text-book.

(7) *Variety of form* gives a charm to questioning. If the questions are unvaried cut and dry points, then there is monotony and boring the pupils.

(8) Questions *should not be too suggestive*. They should not tell much.

(9) Leading questions and questions admitting of answers like 'yes' or 'no' should be avoided as far as possible. Such questions, if adopted, should immediately be followed by a 'why'.

(10) Every question should require an effort of thinking on the part of the pupils. The questions should be properly placed and judiciously put. They should be such as to elicit thinking, fix the pupils' attention and rouse their interest.

(11) The questions should not be hurriedly put like quick-fire machine guns. But sufficient time should be given for pupils to formulate their answers.

(12) The questions should be well distributed in the class. This ensures a proper discipline of the class and a healthy activity of all the members of the class.

(13) The questions need not be surrounded with explicative or round-about expressions. In other words vague questions should be avoided.

Answers and how to deal with them

As a rule skilful questioning will produce good answers. The important feature of a good answer is that it should be the result of thinking on the part of the pupil. If no answer is forthcoming from a class the teacher is at fault. The fact that pupils could not answer many of the teacher's questions is a fault of the teacher. Partial answers should not be treated with ridicule. Such a treatment will scare away the children from coming forward with answers.

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CHAPTER XXV

THE HEURISTIC METHOD (OR THE METHOD OF DISCOVERY), THE OBJECTIVE METHOD AND THE ILLUSTRATIVE METHOD

The Heuristic Method or the Method of Discovery

By the Heuristic method or the Method of Discovery is meant the method by which the pupil discovers knowledge for himself. This was the method advocated by Rousseau, the great French educational reformer, in his scheme of Natural Education which he adopts in the case of his imaginary pupil, Emily. The main point of his method was to bring the pupil face to face with the objects and situations around him, leaving him to find out for himself general principles and laws.

A Training in Scientific Method

The object of this method is to develop what are coming to be known as scientific habits of mind, i.e., thoughtfulness, and power of seeing, accuracy of thought, word and deed. "To teach not mere facts, but the use of facts, and how the knowledge of the new facts may be gained, and use made of them ; to make our pupils exact, and therefore more truthful, observant, thoughtful, and dexterous ; to lay the most solid foundations possible for future self-education ; and to do all in our power to encourage the growth of the spirit of inquiry or research." :—this is the essence of the heuristic work, a training in scientific method.

A Quest for Knowledge

This method is simply the continued process of allowing a pupil to grow by his own efforts by trying to reach a goal in every act he undertakes. It requires the pupil to do something, to read something, to discuss something, to listen

to something for the sake of something beyond. The obtaining or acquiring of information is part of the heuristic process whether by use of Apparatus, Books or Teacher. But this acquiring must be the *active work of the pupil, and not the passive reception of information* from books or teacher.

The acquiring of information is always secondary and instrumental to the act of inquiring. It is seeking, a quest for something that is not at hand. It is not different from the 'Original research' of scientific discoverers. All thinking is research, and all research is native to one who carries it on.

Defects of the Heuristic Method

The Heuristic method has two fundamental defects :—

(1) The extreme advocates of the Heuristic method wish the pupils to find out everything. They would place the pupils in the position of original discoverers themselves. But this position does not seem to be quite tenable. The original discoverer and the pupil are not on the same footing. The original discoverer has a back-ground of organized knowledge, which he utilises when he selects relevant materials, rejects or ignores the irrelevant ones and boldly proves his hypothesis which he later on tests in the light of actual facts. The pupil at school lacks all this preliminary knowledge and has not had the training requisite for the task. As has been humorously remarked, a whole class may be turned out into a garden for a whole day and yet none may discover the Law of Gravitation.

(2) And further, it is not necessary that everybody should discover all knowledge for himself. There is no time enough for it. All the knowledge accumulated in the past we may all profit by without repeating once more the attempts and the blunders of the original discoverers. To ignore all the past knowledge of the human race would involve a waste of time.

Merits of the Method

The teacher may, however, well appreciate the *spirit* of the method. He may *avoid dogmatic instruction*. He may present the materials of knowledge clearly and connectedly, so that the conclusions may easily be drawn on the minds of the pupils. The essence of the method consists in its stimulating the pupil's activity to lead them to think for themselves.

Therefore, although the method is applicable in a large measure to science lessons, it may be employed with effect in the case of almost every school subject. Wherever the teacher leads the pupils to plan out their work for themselves, there we may consider that this method comes into operation. When in a composition exercise the pupil arranges his ideas on the given subject and gives expression to them in his own manner, when he solves for himself a mathematical problem, when he makes his own references to source books and deduces his own conclusions regarding a historical point, it is the Heuristic method that is employed. What the teacher should see in any lesson is that the *pupil's activity is a living genuine process of intellectual assimilation*, the teacher's work consisting only in properly *guiding* that activity.

The Objective Method

In the objective method the teacher uses objects to present ideas. The following are some examples:

(1) To teach simple addition, say $2 \text{ plus } 5 = 7$, the teacher takes two marbles in one hand and 5 marbles in the other hand. He mixes these and counts them as 7.

(2) In teaching about animals he brings a pup and asks the pupils to observe it and elicits its structure.

(3) In teaching about a flower, he brings a flower, analyses it and presents the various parts.

Here observation is supplemented with expression. Otherwise effort and attention are not assured. The teacher should see that the pupils are not absorbed in the object itself. It is only a means to an end. The end is abstraction of certain principles.

This method can be adopted well in elementary schools. It is unsuited to grown up boys whose minds are comparatively free from the domination by the concrete and are capable of abstract ideas. The grown up boys should develop in them the higher mental activity of concept formation.

The Illustrative Method

This method attempts to remove the defects of the telling method. What is told is made concrete by means of familiar examples so that it may be vivid and the impression lasting. Illustration is *explaining the less known in terms of the better known*.

Stories

Stories may be used to illustrate a moral or a principle or to make an idea clear. Real objects, models of objects or pictures or diagrams may also be used for illustration. The actual objects (as in the kindergarten stage), models and solid representations, pictures and cinema shows, outline drawings, diagrams, and verbal descriptions are different stages of exercising one's imagination.

Models

The model of an object involves a certain amount of abstraction. The models of a locomotive and the Globe are examples of useful models.

Pictures

A picture is more abstract than a model, because it has only two dimensions. And yet glance at a picture may give more information than hours of reading.

Cautions for the Teacher

The teacher should not pick up stories and illustrations carelessly. Inappropriate stories and bad illustrations will lead to confusion. Illustrations should be brief and to the point. And further they should not be too many. Too much use of illustrations makes pupils later on incapable to think of general principles without the aid of illustrations. In the classes and the lower forms the teacher should leave some ground for the imagination of the pupil. And also there should be some ground for more imaginative construction by the pupil himself. So *there should be no over-doing* in the matter of illustrations or words. Lessons have been spoiled sometimes by too much illustration as well as by the lack of it. To have the children gaping passively at a rapid succession of illustrations is far from the ideal.

To the kinds of illustrations we have mentioned already we may add clay-modelling, relief map-making and concrete illustrations in Geography, Physiology, Botany, etc.

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CHAPTER XXVI

THE BASIC EDUCATION METHODS OF LEARNING BY DOING : THE PRACTICAL METHOD, MANUAL TRAINING, THE PROBLEM AND PROJECT METHOD AND THE GARY SYSTEM

The Practical Method or the Method of Learning by Doing

The methods discussed so far,—Expository, Question and Answer and Heuristic,—represent the share relatively taken by the teacher and the pupils in the conduct of a lesson. It should be noted that none of these three methods can be exclusively employed to the neglect of the others. It may also be noted that in the lower classes the first two methods are useful, and that in the more advanced classes the Heuristic method is more effective.

We shall now consider in this connection the *Method of Learning by Doing* which is the essential future of Basic Education. By this we mean all those Forms of Constructive Practical Work which have come to be recognised as part of the present day Educational Practice. Kindergarten occupations, all practical work in the Laboratory, the drawing of plans, charts, maps, the making of models and all kinds of Manual Training work are applications of this Practical Method of Basic Education.

Impression and Expression

There are two maxims that underlie the psychology of this Practical method of Basic Education : (1) There is no *Impression* without *Expression*. (2) There is no *Expression* without corresponding *Impression* once more.

Every time an external object influences us, the impression is carried to the Brain. And as a result of the excitation

thus caused certain corresponding activities or movements are called forth. This may be put in condensed technical language. *Conscious processes result in motor processes*. When the activities or movements are called forth on account of the Sensory nerves imbedded in the muscles, impressions of the movements are carried once more to the Brain. So, it may be said that there is an organic circuit, conscious processes leading to motor processes, those motor processes again leading to conscious processes, the net result being that the appreciation of original impressions is rendered more precise and definite.

Recognition of the value of Manual Training in Basic Education

Advantages of Manual Training

Manual Training is not Basic Education. But it has now come to be widely recognised. In all its forms the two maxims above mentioned, especially the second one, may be said to be the basis.

(1) In the first place, the pupil needs to have a distinct clear image of the thing he wants to make. The forming of this mental image is an exercise that will not ordinarily take place unless we intended to materialise the 'image'.

(2) In the second place, the pupil has to draw a sketch or plan with fairly accurate measurements so that he may know the quantity of the materials needed and how he may proceed to work upon them.

(3) In the third place, he has to exercise all his skill in producing with the material on hand the actual thing corresponding to his mental image.

(4) Fourthly, on account of the process he goes through, he comes to know more about the quality of the materials and the nature of the tools employed, so that one engaged upon this kind of work brings to bear upon it his knowledge,

skill, care and foresight. And he goes through his work with *delight*, for he is actually evolving order and symmetry out of a chaos of materials.

(5) In giving his pupils this kind of work the teacher is utilizing, with advantage, the instincts of activity and curiosity which are natural with normal children. In a properly regulated exercise of these instincts lay the foundation for all useful kinds of constructive work.

Hence the importance attached at the present day to Kindergarten occupations, excursions to parks and museums, all forms of laboratory practice, in fact all those activities that give pupils a background of first-hand experience with actual object-lessons in the lower classes.

Basic Education as a Means for the Development of Powers of Observation, Self-Reliance and Honesty

The lower classes especially are now very much less formal and more practical than before. Pupils are required to make actual measurements, draw plans, prepare drawings, perform their own experiments, so that they may intelligently understand what they are about. Practices like these develop the pupils' powers of *observation*, *self-reliance* and *honesty*, for this is the one kind of work where ignorance cannot be concealed behind mere words. Placed institutions like these the pupils keenly feel the need for further knowledge which they largely seek and acquire not as a set-task, but because the work before them demands it for its completion. The pupils' interest and attention are well-maintained and the teacher need feel no difficulty in keeping discipline in the class-room. In all departments of life, it is what we *do* that greatly determines what we shall see or think about. We *learn by doing*. Hence not merely are conscious processes and motor processes intimately connected together, the motor processes would seem to be the more primary and paramount.

The Problem and Project Method in Basic Education

Project and Problem

The term “ project ” was first used by the United States Department of Agriculture for an outlined plan for carrying on a piece of co-operative work. The designation “ home project ” was used in 1908 in connection with agriculture in the secondary schools.

The following serves as a rough definition of the “ project ”. *A project is a problematic plan carried to completion in its natural setting.* This definition provides for an act carried to completion over against the passive absorption of information. It also provides for the development of the problematic situation demanding reasoning rather than merely the memorizing of information. And thirdly, it also provides for the natural setting of problems as over against an artificial setting. The provision for the natural setting of the teaching situation is a distinct contribution of the Project Method. Without the natural setting there is no project.

Some writers use the word “ problem ” instead of “ project ”. But the term “ problem ” is inadequate because it suggests a purely intellectual process ; whereas the term “ project ” suggests doing. Some writers, however, use a compound expression and refer to the method as “ Problem-Project method of Instruction ”, thus emphasizing both thinking and doing, and also pointing to a result.

Purposeful Activity : The aim of the Basic School

Children’s lives are full of activity. Children are constantly carrying out projects and solving problems of their own. In the process of living they learn to think because of the fact that in their activity they are most often carrying out a definite purpose. In order to do so they weigh and judge ideas and material details and select from among these

the most pertinent for the fulfilment of their immediate end. And in working out their definite purpose, they meet difficulties which need to be overcome before the desired end can be obtained.

And, since this is the method of procedure of a normal child or of any normal human being when under no constraint, it is believed that school should adopt it. 'Purposeful activity' on the part of the children is thus made the aim of the school. The teacher's part is to guide towards such 'purposeful activities' as will prove to be the greatest benefit to the children, choosing from among those available activities for first-hand experience.

Steps in the Method

The steps in this method are just the steps in the logical method. The steps in the logical method of arriving at the solution of a problem are: (1) defining the problem; (2) collection of data; (3) hypothesis; (4) verification. The project when carried to completion uses these identical steps of logical thinking. Thus the project furnishes the opportunity for placing pupils in situations in which it is absolutely necessary that they should think in order to solve the difficulty.

Examples of kinds of Projects

The following are examples of some kinds of projects:—

(1) *Physical and Mental* projects such as: making a wooden stool, planting a garden, operating a school co-operative society or the school photographic camera, getting up a school play, etc.

(2) *Learning Projects*: how to write a story, research into a historical fact like the causes of the Great War or the fall of the Moghal Empire in India, soap-making or glass-blowing, etc.

(3) *Intellectual* projects : Does dew fall? Is Hamlet really moved by the spirit of vengeance or the sense of duty? etc.

Value of Project Method

(1) The Project method has great value in directing thinking. The project gives the ideal organization of subject matter to arouse an aim and to direct thinking. It also makes the pupil self-reliant and responsible. It throws him on his own resourcefulness.

(2) It develops the attitude of the scientific research. Projects furnish the natural means for developing a scientific attitude. Particularly if the projects are the pupils' own, and not the teacher's, it quickens and co-ordinates his thinking.

(3) The natural setting of the project makes provision for a strong motive. If a boy, for example, wishes to experiment the testing of seed corn merely to pass an examination, the interest he will have will be very limited. But, on the other hand, if, in addition, he is making the test in order to help his father or his mother, then a large number of interests are roused. And so the boy puts forth a maximum effort. Thus the method properly relates both theorization and practice.

Defects of the Method and a Caution to Basic Education Teachers

But, all the same, the method has certain defects :—

(1) It is not suitable for all subjects like, for example, the English language.

(2) The knowledge got by this method is slipshod and is not systematized.

(3) There is much wastage of time allotted for learning.

(4) It is possible that the attention of the pupils flitters away in non-educational activities.

Bridge between Home and School

And yet, the method is undoubtedly useful in helping to bridge the gap between school tasks and tasks carried on outside the school. It combines the good features of home education with the good features of school education. (Ref: Dr. J. A. Stevenson : The Project Method of Teaching.)

The Contributions of The Gary System to the Ideology of Basic Education

A Combination of Work, Play and Study

This system (W. A. Wirt) aims to combine work, play and study. It is based on the view that the school is a sort of miniature world taking possession of the whole life of the pupil.

Wirt's plan was the very simple one of providing class-room accommodation for only half the number of pupils attending a school. He calculated that, roughly speaking, each pupil should spend only about half his time in class-work. The other half he should spend in the play-grounds, swimming baths, green bowers, work-rooms, libraries, recreation-rooms, laboratories, art-rooms.

The pupils pass from room to room during study time according to the subject they have to study at any particular time. In other words even children of the tenderest age carry on their work in the same principle that is applied in the newer English Universities.

Provision for Work, Recreation and Intellectual Pursuits

These work-play-study schools make provision for all the activities that are usually called *work*, *recreation* and *intellectual pursuits*. The school thus takes possession of the

whole life of the pupil ; and to that extent usurps the place of the home. To compensate for this it is proposed to bring the home closer to the school by affording opportunities for the parents to utilize the school buildings.

The actual school work is like that of the Dalton Plan. Specialization is the knowledge of the teaching in all the levels. Each class is looked after by a master whose business it is to look after the pupils from the human standpoint. He is to be like a father and to be responsible for them to the outer school world. There is also an application to study. The teacher helps the backward boys in studies and gives children real problems.

Value for Practical Life

Critics say that the Gary Sytem has a great practical value for the pupils. That is, it helps pupils very much in their practical life and helps them to become well-informed citizens of the locality. But intellectually, critics may say, it does not contribute as much as we expect of school education. The defect may, however, be due to some incidental features and the new Basic School Teacher may better be on his guard against this possible line of Criticism of his work.

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The following books are recommended for additional information :

THE ART OF THOUGHT—BY GRAHAM WALLAS.

ONE STEP FORWARD (Paul & Co., Madras).

THE LATEST FAD: BASIC EDUCATION—BY ACHARYA KRIPALINE.

NEW SCHOOLS FOR YOUNG INDIA—BY MACKES.

THE PROJECT METHOD OF TEACHING—BY DR. J.A. STEVENSON,
AN EXPERIMENT WITH A PROJECT CURRICULUM—BY
COLLINGS.

CHAPTER XXVII

“ SUPERVISED STUDY ” : “ HOW-TO-STUDY ATTITUDE ” AND THE DALTON PLAN

What the Modern Methods Aim At

The modern methods seek to make the teacher step aside and centralise the child. Montessorianism sweeps away everything, except perhaps the apparatus, that obscures our view of the child. Everything centres in the child. The teacher is kept scrupulously out of the way. The Dalton Plan again asks the teacher to step aside and let the children act on their own account. The Gary System deliberately builds the school round the requirements of the child. These dominate everything. The Project Method is a complete surrender to the child's point of view. In the same way the supervised study centralises the child.

How-To-Study Attitude

The compound word “ How-to-Study ” has recently come into use in educational writings. This is the result of great attention which is being given to the methods of study. The expression, “ how-to-study directions ”, means directions that demand effort from the pupils and throw responsibility upon them. It suggests the idea of partnership in education. The teacher does not spend the whole time in teaching. The pupils do something for themselves under the directions of the teacher. The conditions for such a procedure are : (1) calm atmosphere without distractions, (2) a definite problem, (3) proper references, (4) use of dictionaries, encyclopaedias, atlases &c., (5) note-taking, under-lining and marginal notes in the text-books, (6) the checking of such notes and offering of suggestions and remarks by the teacher. In such procedure

individual attention to pupils is necessary. Backward pupils are helped up. Independent thinking and criticism are encouraged. Debates and discussions, dramatization and recitation are useful instruments in this procedure and appeal to the "mastery" motive.

Supervised Study

A further development from the how-to-study attitude is what is known as *Supervised Study*. Prof. A. L. Hall-Quest is the author of this scheme. The point of the new scheme is the organization of school study in such a way as to secure independent working by the pupils without loss of the necessary guidance from the teacher. The long lesson period of about sixty-minutes is divided into three portions, the first taking one-fifth and the other two two-fifths each. The first part is called the *review* and includes a *resume* of previous work or a preparation for what is just coming. The second is given up to the *assignment*, during which the pupils' curiosity is roused but not satisfied, and indications are given as to how the problems raised may be dealt with. The third period is devoted to silent *individual study*. In the teacher's mind there is a private estimate of the capacities of each pupil on which is based the kind of assignment given to him. The system is a combination of two functions of the class, the class as a *teaching-unit* and the class as an *organization-unit*. The principle underlying the whole is procedure that "the work of the school is properly to supervise and direct the individual while he teaches himself." In this system we find that the value of "how-to-study" lessons is greatly used. But the system involves artificial and rigid divisions of time, and is not suitable to very young children learning to speak a language other than their mother-tongue like Hindi or English.

THE DALTON PLAN OR THE "LABORATORY SCHOOL" PLAN

The Origin

The Laboratory Plan is a scheme of educational reorganization applicable to the work of the pupils from eight to seventeen years of age in the High School and Lower Secondary Schools. The plan was first tried in the case of cripple children. Later it was tried successfully in secondary schools. Miss Helen Parkhurst changed the name of the plan to "The Dalton Plan" as it was first attempted in the American city, Dalton.

Defects of the Present System

It has long been felt that the present class system has several fundamental defects:—(1) There is the first difficulty of getting into touch with the individual pupils. (2) The pupil has no freedom. He is not free to work upon a subject or a pursuit when he is most interested. He is not free to go quickly or slowly according to his own rate of mental speed. So the boy does not feel the freedom and joy in attending to his work. To him therefore the work at school according to a rigid time-table is a lifeless drudgery. (3) The third defect in the present system is that the various groups of the school are not brought into such constant interaction as to make the school a real community. There is not sufficient relation between the work of separate or special departments. (4) There is one cause for all the above defects. That cause is that the boy's standpoint is entirely neglected. The boy's feelings, tastes and interests are not taken account of. He is not allowed to have his own view-point. In one word, he is not respected. Miss Parkhurst attempted to shift the educational point of view, and thus rectify the defects in the present system. Perhaps the most dramatic and systematic break away from the class-teaching unit is supplied by the Dalton Plan.

Working of the Plan

The following is a brief statement of the Plan. The staff draw up schemes of work for class or form suitable for a year's course. In doing this many staff meetings are held so that the claims of different subjects are recognised and they are properly correlated. The year's work is broken up into monthly assignments. These are worked out in detail. Helpful notes are given for pupils to attack each subject in the best way. Information is given as to text-books and reference books. The success of the scheme depends on the care with which these assignments are made. Good assignments are the vital elements in the plan.

Assignments and Contracts

The pupil carefully studies these assignments and contracts to do the work in, say, about a month. He then settles down to his month's work with a definite sense of responsibility and increased interest. He is free to work at the subjects in the order in which he prefers and at the rate which suits him. Only, he has to complete the work within the month and satisfy his teacher that the necessary work has been carried out. If a boy has to be absent from school for days or weeks, he may go on with his assignment from the point at which he left it off, so that there is no gap in his knowledge.

Class-Room Laboratory

Under the Dalton Plan the class-room becomes a laboratory. For example, the children doing history should carry on their work in the history laboratory. There they find text-books, reference books, illustrations of historical interest, and above all, the history specialist to answer questions and give the necessary guidance. After a child works for some time, and if and when he chooses, he may pass on to another laboratory, say, the Geography laboratory and work there

similarly for some time. In the same way he works at different subjects during the day. This freedom of the child to pursue the studies in the way his interest suggests is a most valuable element in the Dalton Plan. Some subjects need not, however, be Daltonized, and those afford opportunities for the class to meet occasionally.

Testing Progress

For testing the progress of the pupil, he is asked to keep up a progress graph like the following :

Sample Progress Chart

School :	Age :	Date begun :	No. of weeks :				
Name :	Form :	Date of	No. of days :				
Address :	Number :	completion :	Absence :				
4th week							
3rd week							
2nd week							
1st week							
Subject :	Mathe- matics	His- tory	Geogra- phy	English and Hindi	Scien- ce.	Social Science	Mother Tongue

Position of the Teacher

Under this system the attitude of the teacher to the pupil is completely changed. His lecturing is reduced to a minimum, and there is far less definite teaching. The children do the work and simply come to him for assistance and advice. The teacher no longer pursues the child. On the contrary, the child now pursues the teacher. This change

of relationship results in *a much healthier attitude* of the pupil to the teacher. To him he goes as *a friend* to ask for assistance. This intimate acquaintance or friendly relation is of great value.

Sub-Normal and Super-Normal Children

The sub-normal child has great advantages under the Dalton Plan, because he can work at his own pace. He will not feel much depressed as under the old system. Under this Plan his outlook is completely changed. Having a job to do in his own way and in the time natural to his ability, he finds pleasure in school life. And, on the other side, the super-normal child, who has received far too little attention in the past, can travel at a good rate and pass from assignment to assignment at his own pace. And, the child of average ability will follow the medium course.

ADVANTAGES OF THE DALTON PLAN

The further advantages of the Dalton Plan may be rapidly summarised as follows:—

- (1) The Natural Cultivation of the 'will to learn'.
- (2) An increased interest in school life due to the children taking a more active and intelligent part in their own education.
- (3) The development of a greater sense of responsibility in consequence of the children's possession of freedom to work along lines determined by themselves.
- (4) The more harmonious and intimate relations between teacher and pupil, and the disappearance of any necessity for the employment of disciplinary methods.
- (5) The special opportunities offered to children of widely different types of mental ability.
- (6) The social effect of children organizing their own work, forming sound judgments, cultivating resourcefulness, and

co-operating with others as a preparation for after-school activities. (7) The Solution of the problem of the child absent from School for a period.

References.—

THE DALTON PLAN—By H. PARKHURST.

THE DALTON PLAN—By EVELYN DEWEY.

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LYNCH.

CHAPTER XXVIII

KINDERGARTEN AND MONTESSORI METHODS

The Kindergarten Method

Aim of the Method

The word 'Kindergarten' means a child's garden. The method intends to treat and train children as plants and flowers in the garden. The teacher considers first the wishes, likes and instincts of children and then tries to afford opportunities for the exercise of these and thus for their development.

Essentials of the System

The following are the essentials of the system—(1) Diverting the spontaneous activity of children into educational channels. (2) Imparting instruction through Play. (3) Short lessons.

Though lessons are short, and continued application is avoided, there are plenty of exercises for children in paper-folding, card-board work, string-laying, clay-modelling, drill, dance, songs, *kolattam*, games, and dramatic action. The children are brought into contact with nature in the school gardens. They have pet animals and excursions.

The children are divided into two sections : (1) Children of the first three standards from 5 to 8 years from the lower section. Here there is no formal teaching at all, and so no rigorous time-table. There may be kindergarten work for also infants above two years. (2) The higher section consists of children of the fourth and the fifth standards. Here formal teaching is attempted. There are three Rs, Nature study, stories from History, a bit of Geography etc.

Kindergarten Teacher

The Kindergarten teacher is a sympathetic friend and companion of his pupils. He is like one of them and plays with them. He does not say, 'Do this' and 'Do that'. He says; 'Let us do it', 'Shall we do it'. He is slow in fault-finding. He encourages individual effort by giving well-merited praise. He knows *the art of making education a pleasure and delight*.

Kindergarten is *not a subject* of instruction but *a method* of instruction. Some people think it is a costly affair. But this is not so. It is estimated that for hundred children the cost of working material comes to about three rupees per month.

THE MONTESSORI METHOD

Education as Development from Within

The greatest service of the Italian Doctor and educationist, Madame Montessori to Education is in the emphasis on the scientific conception of education, in the practical utilisation of liberty, and in the recognition of the stunting of mental growth by the *class method* of education.

That education should be considered as a development *from within* is a principal doctrine with Madame Montessori. The value of this point of view in the formation of our present educational practice is undoubted. Dr. Montessori says thus : "The child is a body which grows and a soul which develops ;We must neither mar nor stifle the mysterious powers which lie within these two forms of growth, but *must await from* them the manifestations which we know will succeed one another." "The educational conception of this age must be solely that of aiding the psychological development of the individual." If any educational act is to be efficacious, it

will be only that which tends to help toward the complete unfolding of *the child's individuality*.

Doctrine of Liberty

The complete unfolding of the child's individuality is possible only if the educator gives the child the fullest expression of what is given or in other words sufficient liberty. The child should by his own *choice* determine his own activities at school. Rousseau and Froebel already explained this doctrine of liberty. And Prof. Dewey is to-day one of the foremost exponents of this general point of view in America.

Dr. Montessori says, "We cannot know the consequences of suffocating a *spontaneous action* at the time when the child is just beginning to be active: perhaps we suffocate *life itself*. Humanity shows itself in all its intellectual splendour during this tender age.....and we must *respect* religiously reverently, those first indications of individuality. If any educational act is to be efficacious, it will be only that which tends to *help* toward the complete unfolding of this life. To be thus helpful it is necessary rigorously to avoid the arrest of spontaneous movements."

But nearer to Dr. Montessori's heart is the liberty to be accorded to the child as an object of scientific study. "The school must permit the free *natural manifestation* of the *child* if in the school scientific pedagogy is to be born." A truly scientific child-study is possible only if we observe the child's free and spontaneous movements.

A further reason for the use of liberty is in Dr. Montessori's belief that "discipline must come through liberty". By discipline she means self-control. "We call an individual disciplined when he is master of himself."

Montessori and Kindergarten Types Compared

A contrast between the Montessori type and the Kindergarten of the traditional type serves to give a clearer picture of the Montessori procedure and of the Montessori conception of liberty. (1) The most evident difference is seen in the function of the teacher. The Kindergartner is clearly the centre and arbiter of the activity in the room. The Montessori directress seems, on the contrary, to be at one side. The Kindergartner contemplates at each moment the whole of her group; the directress is talking usually to one alone—possibly to two or three. (2) The Kindergarten children are engaged in some sort of directed group activity; each Montessori child is an isolated worker, though one or more comrades may look on and suggest. (3) The arrangement of the room shows the same contrast. The Kindergarten has a circle about which all may gather, and there are tables for group activity. On the other hand, the Montessori room is fitted, preferably, with individual tables, arranged as the children will. (4) Montessori provides long periods, say of two or more hours, while the Kindergarten period rarely goes beyond a half-hour. During the period practically all of the apparatus is available for any child, and the child makes his choice freely. The Kindergartner, on the other hand, decides what apparatus should be used during a period. (5) In the Kindergarten all the children at the table, for example, are directed mostly by the teacher, and all keep more or less together in what they are doing. On the other hand, the Montessori child learns self-reliance by free choice in relative isolation from the directress. (6) The Montessori child learns in an individualistic fashion to respect the rights of his neighbours. The Kindergarten child learns conformity to social standards mainly through social pressure.

Thus it is evident that in the Montessori school the individual child has unusually free rein. In the practical working

out of her idea Montessori has set an example to the home, to Kindergarten, and to primary school. "There must be less of doing for the child where he can do for himself; less of the short period programme, where interest is too highly excited only to be too soon dissipated; less of minute direction by mother, Kindergarten, or teacher,—in short, more of opportunity for the child to lead a simple, healthy, normal life." (W. H. Kilpatrick: *Montessori Examined*.)

Defects of Montessori Curriculum

Freedom apart from self-expression is a contradiction of terms. In this matter it should be admitted that Montessori apparatus affords a narrow and limited range of activity. Modelling, drawing and painting, history, literature and art, receive minor place. Stories have little or no place. There is very little of dramatization. On the whole, the imagination, whether of constructive play or of the more aesthetic sort is but little utilised. As William Boyd says, "there is not, and there cannot be, any Montessori method in the things of the spirit." Thus Montessori's curriculum is defective. The omissions are serious. They mean an inadequate scope of expression to a large portion of child nature. Such a limitation of opportunity is, in effect, nothing less than repression, a repression destructive of both happiness and mental growth.

Auto-Education as conceived by Dr. Montessori is the necessary correlative of a regime of freedom. She, however, wrongly believes that the didactic materials like the cylinder box, prisms, rods, etc., intended for the training of the perception of dimensions, thickness and length are really enough to make auto-education possible for each child. We, however, sympathize with Montessori's intention to emphasise the notion of education. "The more fully the child can learn from his own experience without any telling from the teacher, the

more fully is his knowledge his own. If he can feel for himself the problem, if he can work out for himself a plan of solution, and if finally he can ascertain by test of his own that his solution is correct—if these results can be attained from any plan, then surely that plan is a good one."

Auto-Education.

But when we turn from the general conception of auto-education to the actual working of the principle by Montessori, we find that the apparatus invented for this purpose is too inadequate.* As applied by her, we should say that auto-education is more of a wish than a fact.

"If, on the other hand, we consider life itself and the situations that arise therefrom, we find abundant instances of evident self-education. A boy trying to drive a nail soon learns whether he is hitting it on the head. A pair of roller skates suggest their own problem with a minimum of explanation; they also test admirably the solution preferred. The sight of possible playmates suggests socially conditioned activity; the same children pass upon the new comer's ability to participate successfully. We may generalize by saying that self-education is the concomitant of attempted purpose. Whenever one can see the connection between effort and success he is on the road to the perfected activity." This leads to the conclusion that "the nearer to the conditions of normal life that the school life can be brought, the more will real problems present themselves naturally" instead of artificially.

The School as a Social Institution

The Montessori schools were first devised in connection with an effort to assist poor families by taking care of the children during as much of the day as possible. In this way arose the "Children's Houses". These pay much attention

to cleanliness of person and dress. The children are taught to wash their hands, brush their hair, rinse their mouths, and otherwise care for their bodily and personal needs. The school-room is kept in order largely by the children themselves. And it is noticed that children evince much interest and take much pleasure in such real matters.

The general idea of including among the school exercises of immediate such occupations as are valuable for meeting the demands utility is one that proves attractive. If the school can bring into its service something of the gripping interest that attaches to actual and immediate social demand, children will put forth the real effort that counts. The whole conception is but a part of the world-wide demand that the school shall function more definitely as a *social institution*, adapting itself to its own environment and utilising more fully actual life situations.

Didactic Apparatus and Sense-Training

Sense-training is Montessori's initial approach to the study of education. Throughout, it has determined her general point of view. The didactic apparatus was devised to make possible a proper training of the senses. (*Vide* Dr. Montessori's Own Hand Book in which illustrations and explanations of the apparatus are given). Something of this has already been said in connection with the general topic of sense-training. Montessori puts great emphasis upon the "Education of the Senses", because she believes that "the education of the senses makes men observers." The following assertion makes her position clear. "It is exactly in the repetition of the exercises that the education of the senses consist; their aim is not that the child shall know colours, forms, and the different qualities of objects, but that he refines his senses through an exercise of attention, of comparison, of judgment. These exercises are true intellectual

gymnastics. Such gymnastics, reasonably directed by means of various devices, aid in the formation of the intellect, just as physical exercises fortify the general health and quicken the growth of the body." (The Montessori Method, p. 360).

The only criticism that we may offer in this connection is that "what little value remains to the apparatus could be better got from the sense-experiences incidental to properly directed play with wisely chosen, but less expensive and more childlike playthings."

Need for a School without Books

Children of the Montessori school learn to read and write. It is supposed that they play themselves into this learning. But it is quite doubtful if this scene of educational achievement is really reached.

It seems to be pretty well agreed upon that the "three Rs" had, as a rule, better not be taught prior to the age of six. Education is much more than the acquisition of knowledge from books. It is life. It must presume first-hand contact with real vital situations. The danger in the early use of books is that they lead so easily to the monopoly of set tasks foreign to child nature, lead so almost inevitably to artificial situations devoid alike of interest and vital contact. An unthinking public demands the book where it should ask life. But it is best to exclude these formal school arts from the Kindergarten period. A school for the young without books is the great glory of child's early education.

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CHAPTER XXIX

PLAY AND THE PLAY-WAY

What is Play-Activity ?

Play is the creative activity of the young. It is the child's natural mode of behaviour. It is not so much of a definite purposed instinct as a general biological tendency. It differs from *work* as it is pursued for its own sake and not as means for some other end. Take, for example, gardening. It may be *play* for one who delights in the culture of plants. On the other hand, it is *work* for a gardener who looks upon it as a means to earn a livelihood thereby. Ulterior motives are not present in the conscious interest of the play of children, whereas elders look on these activities as varieties of training for health or skill. Another important difference between Play and Work is that there is no external control in Play. There is only *spontaneity*, though the rules are there. They are there, not as external control but as internal guidance. True Art delights in itself and so it is also with regard to Play.

Play and Spontaneity

Play involves many dexterities of the kind required in the mature life of an individual. It may, therefore, be considered as nature's great resource to train up the young *spontaneously* in these dexterities required in later life. As such it can be used and well-controlled by the educator in his art of education. His control must never seem as an external interference but as a spontaneous development of the Play itself in order that it might not defeat its own purpose. Unlike the adult, the child is less self-conscious and does not worry himself about distant future. He lives in the present and his activity is in the present and for the present. This is one more feature of his Play.

Theories of Play

We are not directly concerned with the various theories of Play which biologists and psychologists have invented. Of these various theories some may be mentioned as they cover some of the facts regarding Play. These are : (1) Spencer's Surplus Energy theory ; (2) Biological or Evolutional utility theory ; (3) Recapitulation theory. The second theory keeps an eye for future and the third view keeps an eye for the past ; (4) The Cathartic theory implies that Play is a kind of moral training for the purging out of undesirable elements in our impulses. Each of these theories is partial only and indicates some one aspect only of Play.

Make-Believe

We should not neglect to note a very important phase of Play. This is its *make-believe*. Every playing child is earnest in his play and takes the elements of it with as much seriousness as the adult does with regard to his *work*. That is, he is earnest about the situations. When a child takes his father's walking stick and rides it as on a horse, he means to treat it as a horse. He gets angry if you do not follow him. Though he knows that it is a stick, he wants that it should be taken as a horse for the time being. This is what is called *make-believe*. Even adults have something of this in them. Like children they too get angry when contradicted in such situations which they take seriously.

Self-Assertiveness and Submissiveness

The play-instinct in the child has value for the teacher in securing proper adjustment of *self-assertiveness* and *submissiveness*. The teacher should utilize the play-situations properly for securing proper adjustments of these two important impulses in human nature. What kind of man a child develops into can be easily noticed by the role he takes in play.

Introversion and Extroversion

Another moral value of Play lies in the training that it gives to avoid the extreme forms of introversion and extroversion of the temperaments of persons. The introvert is more introspective and melancholic, living a subjective life of his own. The extrovert is the opposite. He is practical-minded and tends to be boastful. He does not properly gauge his own capacities.

Merging of Play into Work

If the play spirit permeates the life of the child, it brings in a fitness and freshness of mind and spirit as well as a fitness of body and a co-ordination of body and mind which are essential for the development of the highest type of personality. Play then is a means of growth and is of the greatest value both for the growth of the individual as an individual, and also in his social relationships. There can be no growth without action. The action provided by Play will gradually develop into the type of activity we call *work*, while at the same time not having any hard and fast dividing line between such work and play. "True work is the highest form of play ; but it is always the play element in work that is the most important. The play motive is the deepest and most serious. It is deeper than hunger ; the artist starves himself for art " (J. Lee : Play in Education : Macmillans). Work that is done with *joy at heart* and *leisure* that is not wasted, merge and fuse into the one activity of Play.

Influence of Play on the Social Development of the Child

The play and the games of the child, as he grows up, become games and play with others. Play then gives scope for the expression of the herd instinct and the instinct of pugnacity. It gives a chance for the *sublimation* of these instincts. He has chance for developing bodily poise and skill and the use of his hands for making interesting objects

like models and pictures and for doing exercises like story-telling and verse-composing. He has also chances to satisfy his curiosities about the real world. At the same time he is also finding indirectly satisfying expressions for his unconscious wishes and aggressive impulses. "These *sublimatory activities*, which come to fill a larger and larger part in his life, contribute a very great deal to his social development, through the deflection and diffusion of anxiety which they make possible". (S. Isaacs: Social Development in Young Children).

The chances and opportunities which the children have in play to live and work with others, to co-operate, to lead and to follow, contribute to the development of their social capacity for adjustment and of their social feeling. As Adler says, games are communal exercises. "They enable the child to satisfy and fulfil his social feeling. Children who evade games and play are always open to suspicion that they have made adjustment to life." (A. Adler: Understanding Human Nature.) They have also through the co-operative expression of phantasy in dramatic play; "the child is led out from the deepest rivalries and anxieties to the discovery of real satisfaction in social life." And if later work is approached by means of the play way, the good feeling and the feeling of satisfaction enjoyed by children in play and make-believe action, will carry them on as they work together and eventually go out into the world to face life.

Play is also essential for Personality development and Release of Creative Impulses

The chief characteristic of play and work done in the spirit of play is their *whole-heartedness*. There is a natural spontaneous interest in them and so there is no need for external aids to interest. This fact implies that such activities have a valuable mental tone and are intellectually invigorating.

Moreover the whole *power of personality* is put forth in play ; and this itself is conducive to the growth of personality, mentally as well as socially. It is a great aid in translating thought and wish into action. "Whatever you want a child to do heartily must be contrived and conducted as play. It is the core of my faith that the only thing worth doing is really play; for by play I mean doing anything with one's heart in it." (H. Caldwell Cook). In enabling the child to put his whole heart into his work, the play way is essential for his total personality and mental development. "It enables all his powers, mental, physical, social and spiritual, to function, and it enables him to grow up without that calamitous divorce between thought and action that ruins so many of our efforts for progress." (W. M. Ryburn). As it encourages and affords opportunities for creative expression, it may be said that the understanding of play is the key to some of the most important problems of education. It shows the creative impulses in their clearest and most typical form.

The release of the creative impulses is brought about, as the psycho-analytic studies of children show, by telling out in play the inner conflicts in an external field and thus diminishing guilt, anxiety and *inner tension*. Thus recent modern educationists like Dr. C. Cook, Madame Montessori and P. Nunn realize and recognize the importance of Play and Play-way in our educational work.

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CHAPTER XXX

PRACTICAL WAYS IN WHICH THE PLAY-WAY MAY BE USED IN EDUCATION

We have seen how *play* need be considered as the child's characteristic mode of behaviour. We have also realized that therefore the natural means of study in young age in particular is play. Practice, doing things and not mere instruction, is the way of a natural education. We are indebted to W. M. Ryburn, Principal of the Christian High School, Kharar, for suggesting some practical ways in which the play-way may be used in education. In this chapter we shall try to take a note of these important suggestions.

Basic Education and Project Method

The Project Method and the Basic Education Scheme of Wardha are examples of school work carried on to some extent according to the play spirit. A *project* is in reality an embodiment of a play activity. Children are undoubtedly at play when they are engaged in carrying out a project. They have the spontaneous joy of play when they are engaged in getting through a lot of hard and monotonous work. There is a good deal of difference between the work of a boy making bricks for a room he is building and the work of the labourer doing the same thing as in his daily work. This difference lies not in the amount of physical effort involved, for it is the same in both. The difference is only due to the way in which work is approached. The class at work when producing a play puts forth lots of energy in setting up the stage, in preparing costumes and learning parts, though they are in fact playing. Similarly, things done and learnt by the Scouts are really hard things but they do not consider them hard on account of their enthusiasm and interest in their own work, for their Scout activities are play activities.

The Play-spirit in Education

To be educated in the spirit of true play is the best method of education. Education should not be a task, especially in earlier stages. Unfortunately in most schools education is a great task to the child. The play-way is not, however, identical with childishness. It is, on the other hand, an expression of the freedom of true living and is held as the ideal ethical attitude in some systems of thought. It is the spirit of feeling oneself free, however strenuous may be the work. It is also called the spirit of sport. The modern methods of education like the Montessori Method, the Dalton Plan, the Heuristic Method etc., embody this fundamental principle.

Some ways in which Play-spirit may be Introduced

The teacher, instead of taking the role of a task-master finds his place in the scheme itself and becomes himself a player amidst players. The varying characteristics of the pupils are given their proper place in the total scheme as the various notes in a big composition of music. The following are some of the forms of introducing the play-spirit in early education. (a) Dramatization of stories, making the children take up the parts of actors. (b) Mathematical reckonings worked out by imaginary situations of marketing and shopping. (c) Experiments in Science being done by students. (d) Study of original documents of historic importance and tours to places of historic interest. (e) Actual journeys to places of geographic interest. (f) Debates, discussions etc., on Constitutional and Parliamentary lines.

Dramatics and Magazines

In using dramatics at school the point to be remembered is that the finished production is not the main thing to which attention is to be directed. The important thing is the process, the preparation for the performance. It is the play activity that is involved in it that contributes to the develop-

ment of the creative mind. Another important point is the value of letting children themselves make up their own playlets. The aim of true education is achieved when the children themselves improvise their own plays, making up the parts and speeches as they go along. Speeches and Speech periods conducted by the pupils themselves, Mock Trials, Mock Interviews, Mock Parliaments, Debates and Discussions,—all these provide play-way means of training in oral expression in the mother-tongue as well as in a new language like English or Hindi.

Producing of Magazines is also a play-activity. This has also a great value in dealing with the development of the Creative Mind. It is a play activity in written work corresponding to Dramatics, the play activity in oral work.

The use of Games in the Teaching of Languages

In the teaching of the mother-tongue and other languages in the earlier stages a number of games or semi-games may be used. It is the spirit behind the work that is the important thing. The games can be of value for the wise teacher for getting *the easy play spirit* into the work of the class-room. The following are some examples suggested by Ryburn : (a) A number of sentences may be taken and split up into two parts, the beginnings and the endings, which may be put into two separate lists. The children may be required to pick out the beginnings and endings which go together, and to write out the sentences correctly. (b) A list of names may be given and the names of two objects written on the board. The pupils may be asked to sort the words under two or three top words like Sky and Earth, War and Peace, Unity and Division etc. (c) The phrases and clauses of a complex sentence may be given in mixed order and the children may be asked to write out the sentence correctly. These three examples are mentioned just to illustrate the

ways in which the play-way may be used in teaching languages.

Play-way and Teaching of Arithmetic

In the teaching of Arithmetic the Project Method may be used for bringing the Play-way into operation. The children may run a school shop or a post office and learn to keep accounts correctly. Ryburn explains in this connection as many as six arithmetical games *viz.*, (*a*) Dominoes, (*b*) Numbered animals, (*c*) Arithmetical Disc, (*d*) Picture of a ladder of fifty rungs, (*e*) Game of nine pins, and (*f*) Addition Charts.

The Play-way in the Teaching of History, Geography and Science

The play methods may also be employed in subjects like History and Geography. The value of Dramatics in History teaching and in Geography teaching in the form of pageants cannot be over-estimated. Collections of stamps, coins, pictures etc., all imply the use of the play spirit in history, geography, drawing and nature study. The making of maps and charts also brings in the play element. The Heuristic method in science and the laboratory work embody the play spirit to a great extent.

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CHAPTER XXXI

WHAT BASIC EDUCATION CAN DO THE CREATIVE MIND AND ITS DEVELOPMENT

Reinforcing of the Creative Tendency

There are two fundamental tendencies in the minds of the young, *viz.*, the IMITATIVE and the CREATIVE. But as society existed, the Imitative has always won its way upwards to the steps of the throne. On the other hand, "Creation, crushed in the wheels of system, has mostly had to face disillusionment and suffering, and sometimes the penalties of its crime." Different psychologists have their different views as to which of the human instincts is of the greatest force in human life. But as far as our state of education is concerned there has been a growing tendency to emphasise the importance of the herd instinct and the implied imitative tendency. There has been far too much emphasis on imitation and the herd instinct. Education has performed too well in turning out level-headed *followers* instead of inspiring *leaders*. It has done too well in performing one of its functions, *viz.*, the preservation and passing on of what is good (and sometimes bad and indifferent also) from generation to generation. It has lost sight of the other important function, *viz.*, the reinforcing of the Creative Mind in the pupils. It is hoped that Basic Education, if properly conducted, will rectify this defect.

Masses of Indiscreet Followers and lack of Leaders

Consciously or unconsciously education in the past has been on the lines of mass-production, on the lines of activity based on the herd instincts. It is always easy to make things to pattern, to force the raw material into a ready-made mould. Thus it has *been* with our educational work. "We pour in our raw material, in the shape of young lives, and we pro-

duce worthy members of the herd, without initiative, without independence of mind, without the first rudiments of what truly educated men and women should possess.” (W. M. Ryburn). The results of this one-sided education may be seen in the great mass of followers who with ease accept false ideals and shout popular slogans, and the great lack of leaders (with laudable exceptions) who are willing to face the slow and laborious hills of difficulty and hard independent thinking.

Principles involved in developing Creative Mind

If, however, real progress is to be attained and if we take up the task of developing young men and women with creative minds, we should first realize that such development should be started as early as possible in the child's life even if it be from the cradle stage. It is true that the school cannot take up the child from the cradle. But then this way of developing the mind of the child may be begun as soon as the child comes up to the school. In this process, certain definite principles are involved.

(1) Freedom and Self-Direction

The first of these principles is Freedom. It is necessary that the child should be helped to grow up in an atmosphere of freedom, to think out for himself though sometimes wrongly and to do things he wants and in the way he wants. One of the marks of a Creative Mind is its freedom from the hands of conventions and the fetters of habitual practices and customs. This does not mean licence or anarchy but only freedom from “the dead hand of the purely receptive and imitative.” This kind of freedom also means hard work on the lines one chooses as an inventor like Edison who even as a young boy of sixteen years worked so hard that he *desisted* from food and rest while engrossed in his investigations. It is on account of the possibility for such a freedom that the

Project Method is so valuable in the early years of school life. It is a method of *self-direction*. When this method is used the child learns to improvise, to invent, to experiment and to find knowledge in all possible ways. The child also learns to translate that knowledge into action till the project is accomplished. That is how the Creative Mind develops.

(2) Need for an Environment rich in Materials and Ideas

The Freedom secured for the child's independent thought and action will not be of any good unless also a suitable environment is built up for the child. A free child requires an environment rich both in *materials* and *ideas*. Materials like paper and paint, clay and plastic, cloth, wood and cotton, the charka or the spinning wheel, scissors and needles, are indispensable. The more difficult thing for the teacher is to have proper *ideas* on which he can secure the focussing of the child's attention and interest. And also there should be the proper *technique* by which the child can express the idea he takes up in action and accomplishment. A *proper technique* and a *proper* idea will soon succeed in helping the child in acquiring new knowledge and new expression, new thoughts and new ideas. A self-chosen Craft and a teacher well-trained in the Art of Basic Education can supply these necessary techniques and suitable environment.

(3) Activity necessary for Developing Creative Mind

Activity is natural and interesting for the young. It is needed for a proper development of *personality*. What is needed is not merely the activity of the *Body* and the sense-organs. Much activity of the *Mind* is also needed, on the part of both the teacher and the pupil. This may be secured by play methods already indicated in the previous chapters. The spirit of play transforms work into play as in the case of Edison who used to work in his boyhood eighteen hours a

day without food or rest. The Creative Mind cannot be produced and developed unless it be by means of such an activity. This will mean that the system of teacher-centred class is to be reformed so that *a correct proportion of activity and passivity* may be maintained in the teacher and the pupils. Thereby the pupils are not relegated to mere passive reception of teacher-imposed ideas.

(4) Individual Treatment versus Mass Treatment

No two pupils in the class are exactly alike. The pupils in the same class come from different strata of society. They belong to families of different status and education. They differ also with regard to their natural endowments, aptitudes and aspirations. So, the teacher has to avoid standardization and catering to the needs of the average, to mere numbers taken as a whole. If the developing of the Creative Mind is what is to be aimed at, the 'class idea' is to be overcome and opportunities should be afforded for individualism and individual development. We should give up the idea that the same thing and the same method is suitable for all the pupils in the class, for it is "this mass treatment that has effectively destroyed the budding creativeness in hundreds and thousands of children". Individual treatment is unavoidable if the development of the Creative Mind is to be aimed at. By individual treatment we mean the understanding of the children's special aptitudes and needs, the recognition of their individual differences, and providing suitable opportunities and instructions for following up those special aptitudes and aspirations.

In hearing and making up stories, in getting up personal or school magazines, in writing and enacting plays, in discussing subjects, in preparing answers to questions, in using devices, plans and maps, in drawing, painting and singing, in managing science experiments and using scientific know-

ledge for preparing useful objects, in all handicraft work, in hobbies and in class management,—in all these activities the teacher can find much material for providing means for the encouragement of the Creative Activity in his pupils. By means of *sympathetic encouragement* and *wise suggestion* the properly trained Basic Education teacher can do a lot to help children to develop to the full all their creative powers.

It should be the aim of the successful Basic school teachers, from the time the child comes to the school till he leaves the school, to get away from the old school habit of inducing passive receptivity in the teaching of all subjects and to encourage in the child the spirit of *adventure* and *experiment*.

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PSYCHOLOGY AND ART OF EDUCATION

PART IV

PSYCHOLOGY AND ART OF DISCIPLINE

PSYCHOLOGY AND ART OF EDUCATION

PART IV

PSYCHOLOGY AND ART OF DISCIPLINE

CHAPTER XXXII

WHAT IS DISCIPLINE ?

Fundamental Principles of Good Discipline

What is Discipline ?

Even at the very outset let us note that schools should be organized for boys and girls, and not for mere examinations. The one and the only aim that the Teacher should have in mind is the welfare of the child—mental, moral and physical. Let us ponder over the words which Wren says. “Organize the school to benefit the scholar,—to train his faculties ; to widen his outlook ; to cultivate his mind ; to form and strengthen his character ; to develop and cultivate his aesthetic faculty ; to build up his body, and give him health and strength ; to teach him his duty to himself, the community, and the state ;—in short, to make an honest, capable, and healthy man of him ;—organize the school for this, and not to prepare him for the examination.”

The purpose of school training is not the acquisition of knowledge only. In the first place it is the creation of habits,—the habit of being acquisitive, diligent, obedient, punctual, truthful, and persevering. And, in the second place, it is the development of a right attitude towards the matters of life,

Different Senses in which the word 'Discipline' is used

The word, Discipline, is used in several senses :—(1) Formal training ; (2) Restriction imposed from without ; (3) Self-control ; (4) Sum of the acts directed to the training of the body and the cultivation of the mind.

(1) *Formal training* is the name applied to a certain educational doctrine, which may be illustrated from Jerome's advice on the education of Paula, that she should learn the names of the patriarchs from Adam downwards in order to strengthen her memory. The theory of formal training implies that general mental powers may be developed by special and particular exercises.

(2) The term, *Discipline*, signifies training. But the training is frequently regarded as a process directed by some external authority. One speaks of the discipline of the cane. Now the proudest boast of many teachers is that they are good disciplinarians. This means that they can keep children quiet and subdued ; not that they can teach them or even allow them to teach themselves. We boast of being ' a good disciplinarian '. But this may be the last refuge of incompetence.

(3) *Self-control* is the only kind of discipline that has moral value, and that rests on principle rather than on expediency. It may be secured by taking the class or school into a kind of partnership with oneself, avoiding to the utmost of one's ability the infliction of punishments and encouraging pupils to be proud of the tone of their class or school and devoted to educational aims and projects of their own adoption. The teacher who ' brings out the better side ' of his pupils is procuring order through self-control. During the intelligent pursuit of aims which have been made their own, children have little difficulty in exercising self-control.

(4) The fourth meaning of Discipline is that it is "the sum of the acts of the school directed to the training of the body and the cultivation of the mind."

The Best Definition of Discipline

Now, the first two senses mentioned in (1) and (2) above, constitute the narrow meaning of the term discipline. The third meaning brings out the soul or the essence of the state of discipline in the highest sense of the term. The fourth implies the means adopted for bringing about such a state. It appears to me that the best definition of discipline should imply a statement of the soul or essence of discipline and also the means adopted in securing, i.e., the points mentioned in (3) and (4). So I would roll up these two points and enunciate the following definition:—*Discipline is that orderliness whose essence is self-control, and which is secured by the sum of the acts of the school directed to the training of the body, and the cultivation of the mind.* It expresses itself in conduct and in the ways and means by which the school as a whole is governed. It concerns itself with child development, with the formation of character. It teaches the child what to love and what to avoid. It lays the foundation of *self-inspection* and *self-control*.

The Ultimate Aim of Discipline

Thus we see that the ultimate aim of discipline, and of teaching generally, is mainly *moral*. Its aim is preparation for life, for the highest destiny of which an individual is capable. But the immediate aim associated with the graded steps in the educative process is not necessarily moral. Mostly it has no direct connection with morality. These steps are the training ground from which the developed personality should emerge. “Every minute is a factor in the process of the formation of mental attitudes and habits from which character is finally forged, and upon which an intelligent activity is founded.”

External Discipline and Internal Discipline

Discipline may be said to be of two kinds: (1) External Discipline, and (2) Internal Discipline or Self-Discipline. Education is practically perfect when the first is transmuted into the second. The "law for man is, in the first place, an external law. When man has once recognized the inner law and bowed before it through his reverence and voluntary submission, he is ripe for liberty." (The Simple Life: C. Wagner.)

The rules of a school, added to the influence of its chief, give the *standard* of school discipline. If the discipline is sound, the *school tone* will also be sound. "Tone is both the voluntary and involuntary manifestation of the moral attributes of a school, the spirit of which is making its presence felt." Good tone, therefore, implies sound discipline.

Differentiation is necessary with regard to discipline. The kind of discipline that should prevail depends on the kind of pupils, the age and the class and the sex of the pupils. For example, "the kind of discipline that is suitable for infants between three and four years of age is not equally applicable to children between six and seven." As the child ascends from class to class, the discipline should correspondingly rise in its demands upon him.

The children of the lower classes must be subjected to a very careful, judicious and sympathetic disciplinary treatment. The higher classes do not need exactly the same disciplinary treatment. The scholars there have already passed through the earlier stages of a firm discipline required, and must have already shaped their habits accordingly. It is, therefore, desirable that the older pupils should learn to govern themselves collectively and individually. Of course kindly *corrective powers* should always be at hand. But the pupils should be *unconscious* of their presence. For,

one of the symptoms of perfect discipline is the scholars' *unconsciousness of the existence of law or rule*. Law ceases to exist when full obedience is rendered to it.

Six Fundamental Principles on which Good Discipline is based

Bray in his book, 'School Organization', mentions six fundamental principles upon which every kind of good departmental discipline must rest, and which appeal to the three sides of a child's nature.

(1) That the premises and routine of the school must be such as to ensure to each scholar reasonable comfort. Good ventilation, simple suitable seats, and change of work and position are, therefore, necessary.

(2) That moral beauty should be loved and moral depravity condemned. Opportunities of exciting pleasurable emotions by the contemplation of moral attributes of the sight of natural beauty ought, therefore, to be seized whenever possible. Of course, it is equally important that vicious qualities should excite emotions of pain.

(3) That the intellectual and imaginative faculties must be trained. Imaginative power appears to wane after a child has passed its sixth year. This is probably because little or no pains are taken to cultivate this power that is to colour life as the sun colours the flowers. We can govern children by imagination. By speaking to their soul we can electrify them, as it were.

(4) That the law of the school must be based on natural law, and a knowledge of child life.

(5) That, while discipline is framed to meet the collective attributes of children, it should be regulated as far as possible to meet each child's natural disposition. A word

of kind reproof will work wonders with one pupil, while to another pupil severe rebuke or even stronger measures may have to be applied sometimes.

(6) That the teacher should be in sympathy with child nature and respect its natural tendencies and reasonable desires. "Sympathy is our best friend in education."

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CHAPTER XXXIII

AIDS TO DISCIPLINE : ATTENDANCE, REWARDS

We shall now proceed to notice briefly some of the aids that have for their object the formation of good habits and the general furtherance of the high aim which discipline has in view.

Attendance

Punctual and regular attendance is of great value. On this depends the efficiency and progress of the scholar. Though the teacher is not directly responsible for the regular attendance of the pupils, punctuality is more immediately within the range of his office. The organiser ought to make every attempt to obtain a high degree of punctuality. "Slack attendance means slack everything, and the beginning of moral training is the training in that regularity and punctuality of attendance which lead to regularity and punctuality in the discharge of all the duties of life."

Unpunctuality is such a common vice amongst the Indians. We see that it very often upsets arrangements and causes inordinate delay, inconvenience and annoyance to others. And so the Indian teacher ought to take every measure to rid the pupils who are to grow into the future citizens of the country of this ugly habit. Regularity and punctuality ought to be valued for their own sake apart from the immediate or ultimate advantage in the way of school efficiency.

Rewards

Virtue is its own reward

There are opposite views regarding the question of the giving of prizes and other rewards. On the one hand it is held that while human nature is human nature, Rewards are

not only right and desirable, but indispensable. On the other hand it is held that in education there should be no such thing as Competition. It is said that education is a system of development and not a vulgar struggle, an ugly competition. Prizes and rewards are said to be but a form of bribery and corruption and always are matters of competition.

But prizes and rewards need not always be matters of competition, a form of bribery and corruption. They can be used as stimulants and as a means of recognition, of encouragement to, and reward for, praiseworthy effort. Provided rewards are (1) the rewards of *effort*, (2) of little intrinsic value, (3) few in number, (4) and difficult of attainment, they will not do much harm. But, on the other hand, they do much good *provided they do not encourage cram.*

Rewards are usually given for (1) attendance, (2) conduct, (3) progress, and (4) games.

Rewards for Attendance & Good Conduct—not advisable

In some countries like America, for example, attendance prizes are discountenanced on the ground that it is ridiculous to offer bribes for regular attendance at places that are to be regarded as temples of learning. On the other hand the London County Council provides in its bye-laws for prizes and medals to be awarded to scholars attending the schools partly as a stimulus to attendance and partly as a reward for conduct and industry, according to a scheme drawn up by the Head-master, with the approval of the Managers.

It is possible that this system has a favourable influence upon school punctuality and regularity. It is also possible that where home influence and school discipline are sound, the withdrawal of rewards would have no effect. At any rate public commendation and the awarding of a badge or a privilege to all boys for unbroken year's record of Regularity

and punctuality can do no harm in our country, provided it is understood that these are not everything necessary for good progress in education and provided also they are understood as being the rewards of good honest effort.

Requirements of Good Rewards

All good rewards must meet four requirements. They (1) should promote effort and (2) be of small value. And (3) they should be rare and (4) difficult of achievement. It is exceedingly difficult to give rewards for good conduct which meet all these four requirements. If a boy is 'good' by sustained effort, it is very often the case that he is a meek coward or a mere mediocre who is unworthy of any prize. If prizes are given for good conduct, as Wren observes, they cannot be few in number, save in a school replete with rascals. And further, who is to know the hearts of boys and say whether they are able to withstand temptation in each case? Who is to presume to say that the boy who is delicate and meek is "better" than another who has more courage, bounding vitality, and enterprise. So it is best to let virtue be its own reward, and immunity from disgrace and punishment is blessing. The idea in the pupil that he should work up a reputation for a saintliness and has to go for a prize may do more moral harm than good by breeding hypocrisy and low motive. The whole school tone should be such as to tend to make good conduct the merely *normal* condition, and not the condition calling for reward.

Discriminate Rewards for Good Progress

Rewards for progress should be used with discrimination, and they should be given for actual and not relative progress. If this point is borne in mind such rewards serve useful purpose. They encourage, stimulate, and help the hard working plodder. They should not be given for mere cleverness which is reward enough in itself.

There are two kinds of prizes for progress :—(1) the fixed periodical prize, and (2) the prize given by the discerning and discriminating teacher, whenever it is well deserved, to any boy who has made a sustained and considerable effort. While only a few need compete for the former which is bound to go to one of the few clever boys at the top of the class, the latter tempts every boy in the class to reach out the hand of honest endeavour.

Forms of Prizes

It should be carefully noted that rewards of progress must be rewards of merit and honest endeavour, but not of accident such as cleverness or possession of some private advantage. And further they should be signs of merit of the recipients and not of the wealth of the donors. (a) A *Book* on the subject in which the scholar has made progress is a very good form of prize. (b) A *Certificate* is an excellent form. The highest type of certificates must be very few and difficult of attainment. (c) The *timely and judicious use* of praise in the ordinary course of school work will often effect more good than the remoter prizes and certificates. (d) *Scholarships* for clever and industrious children are of immense use.

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CHAPTER XXXIV

THE EVIL OF PUNISHMENTS AND THE BLESSING OF TEACHER'S AFFECTION

Punishment is an Evil

“Punishment is an evil thing and a thing to be avoided. So is the surgeon's knife. Both are necessary however.”

The true Art of Discipline lies in the complete government of children without their consciousness of restraint. This means that when resort to punishment becomes necessary to that extent the controlling power and influence of the teacher falls away from the ideal. “Hence every task imposed, every censure administered, and every measure of restraint applied, implies some defect in the machinery of government, or possibly some weakness in the personality of the staff—each is a confession of failure to influence a pupil by the best and most lasting means. All punishment is in itself an evil.” (Bray: School Organization). “A good master does not need to be severe—because he is certain.”

Evils of Rigid Government

Many teachers insist on a rigid kind of class government with the view probably of avoiding or reducing the possibilities of offence or breach of rules. The result is that the pupils tend to become automata. But this is not discipline. It is rather the negation of it. It should be conceded that a certain amount of *liberty* should be granted to each pupil. Otherwise there can be no *choice of action* and consequently no *training of the will*. “*Liberty is the salt of the school*”. It should be given even if breach or non-observance of rules is practically certain to follow. The notion that the teacher is to watch the children to prevent disorder and idleness should soon pass away. The

feeling of *social responsibility* should be inspired in the pupils by the example and personation of the teacher and by organizing trials by Jury consisting of the pupils themselves (as is done in some American schools) or by adopting some such plans as appointing Presidents and Ministers (as is done at Sevagram Basic School). Things should be so arranged and pupils should be so trained that in the class-room there is as good order when the teacher is absent as when he is present. This, for example, has been so splendidly exemplified in the management by Principals E. W. Aryanayakam and Shrimati Asha Devi in Sevagram, Wardha. (Nai Talim Sevagram: Hindustani Talimi Sangh, Wardha).

Individuality of the Child ought not to be suppressed

A closer study of the individual characters of children would often obviate the necessity for punishment. It should be remembered that the child is full of potential activities. His delight is to give expression to them. Good discipline, therefore, should keep all active tendencies adequately and educationally employed. A good deal of *sympathetic understanding and tact* is necessary in the educationist to be able to direct the activities of the child in such a manner as not to cast the individuality of the child. Individual breach of order or instructions on the part of the child is sometimes inevitable on account of the attendance of his activity and enthusiasm. "*Such breach is child's safety-valve for the time being.* The child, however, must be made, for its own sake, to render obedience, to cultivate will power, and thus keep its activities under proper control. Self-restraint can only come from experience and training." (S. E. Bray).

Reproof, Caution or Censure

In this connection it is worth while noticing the kind of punishment Bray considers as the most effective form. "If the tone of the school is sound and the class teacher has the

respect of the scholars, it often happens that the most effective punishment is the *reproof of the teacher* coupled with the disapproval of the conduct of the offender by the other members of the class. But much depends on the way in which the reproof is administered. It is not so much what is said—though that, of course, is important—but the manner in which the words are spoken that strikes some, leaves the lasting impression and gives the energising power that leads to amendment—for the ultimate object of punishment is repentance.” It should be borne in mind that continual fault-finding does harm. Private censure is, as a rule, best.

Twofold function of Punishment

It should always be remembered that punishment has a twofold function—*Reformation* on the one hand, and *Prevention* on the other. In former days, and until very recently, the punishment of children was taken as a matter of course, and was universally regarded indispensable in education. Even Dr. Arnold had recourse to occasional flogging. And Rousseau, who advocates the theory of leaving things to nature, occasionally advocates quite severe punishments. Now-a-days, few people advocate rude forms of punishments. Some still advocate a fair amount of punishment, while others consider that it is possible to dispense with punishment altogether. There is room for many shades of opinion between those two extremes. Anyway the need for punishment, if it exists, is an indication that the system is rotten and that the teachers are incapable.

Punishment should have a very minor place : It should never be severe

I am disposed to agree with the view of Bertrand Russell (“On Education”) who believes that punishment has a certain *very minor place in education*, and it *need never be severe*. He includes under punishment speaking sharply or reprovably.

Natural spontaneous expression of Anger

As Russell thinks the most severe punishment that ought ever to be necessary is the natural spontaneous expression of indignation. The expression of anger by an impulsive exclamation may sometimes be enough to make a boy burst into tears. This I had myself seen happening in the Basic School at Sevagram—Wardha. It is also a good method of punishing a boy, when reason and exhortation have failed, to take him to a room and leave the door open, and tell him he can come back as soon as he is good. In a few minutes, after crying vigorously, he comes back, and is invariably good. He understands that in coming back he has undertaken to be good. If the tone of the school is sound and if the teacher commands the respect of his pupils more severe penalties than this will be unnecessary.

The Blessing of Teacher's Affection

Reasonable parents create reasonable children. And likewise reasonable teachers will have reasonable pupils. The children must feel their parent's affection and the teacher's affection—not duty and responsibility merely, for which no child is grateful. But warm love, which feels delight in the child's presence and ways will be readily and happily responded to. Always a prohibition must be explained carefully and truthfully. If these conditions are present children will seldom do anything deserving a serious punishment.

Isolation

When a child persistently interferes with other children, or spoils their work or pleasures, the best penalty is banishment and thus making the child feel that he is missing pleasures and advantages which others are enjoying. Madame Montessori describes her practice of isolating a refractory child by making him sit in a comfortable little arm-chair in

a corner of the classroom in such a manner as he might see his companions at work. "This isolation almost always succeeded in calming the child; from his position he could see the entire assembly of his companions, and the way in which they carried on their work was an *object lesson* much more efficacious than any words of the teacher could possibly have been. Little by little, he would come to see the advantages of being one of the company working so busily before his eyes, and he would really wish to go back and do as the others did. We have in this way led back again to discipline all the children who at first seemed to rebel against it. I do not know what happened in the soul of these children whom we found it necessary to discipline, but certainly the conversion was always very complete and lasting. They showed great pride in learning how to work and how to conduct themselves, and always showed a very tender affection for the teacher and for me." (The Montessori Method: Heilemann).

Children have a natural liking to learn things

It should be noted that children like to learn things, provided they are the right things properly taught. With regard to food, unless a child is ill, let it have its food if it wants or go hungry. Exactly the same method should apply to instruction. Every school should have a large bare room to which pupils could go if they did not want to listen to a lesson. But they should not be allowed to come back to lessons that day, and they should also be sent there as a punishment if they behaved badly in lesson-time. The teacher should see that they were bored if they were absent during lesson time. If they see that they are bored while others are learning they will presently clamour to be taught. And then the teacher can appear as conferring a benefit, which is the truth of the situation.

Praise and Blame

Praise and blame are an important form of rewards and punishments for young children as well as for older boys if conferred by a person who inspires respect. However, in regard to both, a certain degree of caution is necessary. (1) Neither of them should be comparative. A child should not be told that he has done better than so-and-so, or that so-and-so is never naughty. The first produces contempt, the second hatred. (2) Blame should be given much more sparingly than praise. It should be a definite punishment, administered for some unexpected lapse from good behaviour. (3) Praise should not be given for anything that should be a matter of course. It should be given either for a new development of courage or skill or for an act of unselfishness or sacrifice. Any unusually good piece of work should be praised. To be praised for a difficult achievement is one of the most delightful experiences in youth. The desire for this pleasure is quite proper as an added incentive. It should not, however, be the main motive. The main motive should always be an interest in the matter whatever that may be.

Precept and Example

Grave faults of character, such as cruelty to animals for example, cannot be cured by means of punishment. The best thing to do is to teach the boy respect for life both by precept and example. The fact that others have feelings like his own should be brought vividly to his attention. All moral instruction must be immediate and concrete. It must arise out of a situation which has grown up naturally, and must not go beyond what ought to be done in this particular instance. The child himself will be able to apply the moral in other similar cases. It is ridiculous to give dry and abstract rules of conduct and to burden the boy with a number of counts at the very outset. That spoils his initiative.

Deprivations

For misbehaviour pupils are sometimes deprived of marks or of place or of some rights or of office. There is no doubt that this is the safest of punishments. But I do not think that it is the best method by which permanent results may be obtained. I do not think that it is quite good to deprive the pupils of marks honestly earned. As for the deprivation of elementary rights like recreation, it results in the bad feeling of the pupil rather than in the finer feeling of repentance.

Impositions

It is also better to avoid the meaningless and pernicious drudgery of writing a word a number of times or copying sentences from books, or of committing to memory meaningless trash or beautiful poetry. Disgust and repulsion are the only results of this kind of irrational punishment. Lifeless routine of whatever kind is always degrading in its moral effect. It is a slur on personality.

Detention

Another form of punishment which has serious objections is "Detention". It suggests that the school is a prison to be endured only as long as necessity demands. It also degrades school tasks by turning them into means of punishment. Other objections to detention as punishment are that it deprives the pupil of healthy outdoor life and involves the over-worked teacher in drudgery of the most irksome kind.

Fines

Fining is not at all a good form of punishment. A fine falls on the parents. Those who can afford it coolly neglect it. It is a hardship on poor parents. Frequent fining brings about grumbling among the parents and destroys the

cordiality that should exist between the school and the home. To hide their guilt from their parents some boys may have recourse to pilfering. Rich boys treat fines with contempt. The following remark of two boys of a school in which fining is common reveals the futility of this method. "Now let us have six penny worth of talk."

Noise

Here it is perhaps worth while to remark that a noisy class is often a busy one. "The inhuman days when perfect silence was demanded all day long have happily passed, at least, from the best schools." One of the requirements of children is occasional noise.

Expulsion

Expulsion is fraught with very serious consequences. And so, it should only be resorted to when all the resources of the school have failed, and when the pupil's presence is a real menace to the discipline of the school. This is always a confession of the failure of the school to educate a child that has once been admitted.

A Final Word : No Light without Love

It should always be borne in mind that, whatever be the method he adopts, the teacher should always try to secure the *confidence* and *affection* of his pupils. There is no Light without Love.

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CHAPTER XXXV

ABSURDITY OF PHYSICAL PUNISHMENT

An Educationist's Perverted View

Let us look at an absurd and most silly and cruel disciplinary measure that is advocated by Wren, the Assistant Director of Public Instruction in the Bombay Presidency, one who is taken to be an expert authority on Indian School Organization. He quite stupidly writes in his book published so lately as 1930 in the following way :—" One useful disciplinary measure is the special and unfailing Saturday-morning visit of the headmaster to each classroom, accompanied by the head-pattiwallah, who bears an entry book and the cane (in a bag). ***. In each room the headmaster says to the teacher, in the hearing of the boys, "Is there any boy here who has given you cause for complaint this week in the matter of regularity, punctuality, diligence, or conduct? If so, tell him to come out in front."***. The first time a boy is distinguished by the teacher as unsatisfactory for any reason but that of ability, his name should be entered in the book, and he should be warned if ever he is so distinguished again he will be thrashed. ***. The second time he should receive two sharp cuts across the buttocks, and the third time four. After that a thrashing is indicated, but it is highly probable that the first time will be the last. *** This absolutely regular disciplinary visit, like the supervision of the exercise books, is found to work wonders when introduced. The loafer, shirker, idler, or mischief-maker, feels that his day is over in face of this horribly certain and regular interview, and the entry of his name is a blow from which he never recovers to his old strength of evil."

It is really a wonder that, after all that the Child Study Movement has done, educationists like Wren still consider

Corporal Punishment as efficacious. It is deemed that when the offence is grave, it is desirable to administer such punishment before the class or even before the whole school. I have seen to my great horror an eminent educationist doing this.

Legal Aspect

With regard to the *legal aspect* of the question it is well to note that any kind of unlawful restraint or punishment applied to a child by a teacher is "actionable" and renders the teacher liable to fine or even imprisonment. But in certain courts justification is successfully pleaded when the punishment is "moderate and reasonable".

Hollow Arguments advanced in defence of Physical Punishment

The following are some of the arguments advanced in defence of physical punishment :—

- (1) Certainty and speed are the essential traits of a good punishment. And these traits are best seen in this form of punishment.
- (2) As want of obedience to natural law inevitably brings punishment, so a break of rules framed for a child's benefit ought to bring corresponding pain and penalties. This will serve as a foretaste of the reality of things when laws are violated. This is Herbert Spencer's view of punishment.
- (3) Rigorous inflictions of penalties and painful reactions proportionate to the transgressions generate "right conceptions of cause and effect." They are "true restraints" and "most efficient" remedies.
- (4) "The abstract right to inflict corporal punishment is a great force in itself." Its strength lies chiefly in its silent reservation and suggestiveness.

Its power is the greater if it is associated with a strong personality.

- (5) Anything that interferes with the machinery of the school government, with the arrangements made to secure the aim of the school must be brought into line or cast away. Society is protected against the lawless individual by a graded system of penalties. Why not then the school which is preparation to society? "The iron 'regime' must therefore be brought into play to compel obedience" (S. E. Bray: School Organization).
- (6) Nature's penalties are often remote. But the child cannot wait for their operation. He must be trained. "Immediate penalties wisely applied, are often immediate remedies." And further, "the child is not naturally a moral being: far from it. Primitive man dominates him. He is by no means *sensitive* to moral distinctions or moral influence." "Those who think corporal punishment degrading, etc., consider the child more angelic than wild." (S. E. Bray).

A very primitive form of punishment

There is no doubt that corporal punishment is a very primitive form of punishment. If we examine the origin of many school offences, we will see that the teacher or the organization of the school is more to blame than anyone else. If the teacher's personality is good, if he has sound character and principles, if he has real love and tact, and if he has the capacity and interest for teaching, and also if the atmosphere of the school is pervaded with wholesome influences and noble ideals, in a word, if the *tone* and *spirit* of the school is like that of an "Ashram",—then punishment in any form is not only unnecessary but also unthinkable. The fact that

in many well-disciplined schools corporal punishment is never resorted to should give us food for thought. “ Whatever may be our opinion of the need for corporal punishment, it will do us no harm to admit that its necessity is a sign of weakness in the school.” (Dr. H. R. Hamely : School Discipline).

In my view it appears that Physical Punishment is never right. In mild forms it does some harm. And, in severe forms, it generates cruelty and brutality. The following objections may be urged in opposition to it :—

Reasonable Objections against Physical Punishment

- (1) Physical Punishment degrades him that gives it and him that takes it, unlike wisdom that blesses him that gives and him that takes.
- (2) It is arbitrary.
- (3) It is unnatural because it is a treatment for symptoms and not for psychological causes.
- (4) There is an absence of a proper standard for applying the punishment, for temperaments vary from child to child as the beam of a delicate balance vacillates in the breeze.
- (5) It appeals only to brute instincts and not to the finer elements in the child, to the “ sweet reasonableness ” in him.
- (6) It places the child in opposition to authority.
- (7) It creates ill-feeling between child and teacher.
- (8) It is cowardly, for it uses strength against the weak and hopes to terrorise and bully the mere child.
- (9) It is ineffective, for the repressed tendencies in the child rise up thousand-fold when restraints are removed.

- (10) The relation between the teacher and the pupil is one of the holiest relations that ever exist between human beings. And there is no better basis for such relationship than trust, open confidence and mutual regard, esteem and love. But there is no doubt that physical punishment totally destroys this very basis. The modern parent wants his children to be as unconstrained in his presence as in his absence. He wants them to feel pleasure when they see him coming. So also the modern teacher. To win the genuine affection of children is a joy as great as any that life can ever offer.

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CHAPTER XXXVI

SOME IMPORTANT AIDS TO DISCIPLINE, PROGRESS AND CREATIVE WORK

Happy Hours

The following are some of the positive, important and healthy aids to Discipline pointed out by Bray in his book on School Organisation. There is one point which teachers should always remember, and that is this: "All agencies for good become the more effective by being closely associated with *happy hours* in the lives of children."

Reports to Parents

We cannot over-estimate the value of a strong sympathetic link between the Home and the School. The wise teacher may with advantage try to ingratiate himself into the hearts of the parents and explain to them about the behaviour of their children. A visit to them or a letter to them by the teacher has often been the turning-point in a new and worthy career for a child, or a fresh and agreeable departure from old ways on the part of the parents.

Periodical reports to parents is of immense use. They have a right to know what progress their children are making. And this information should be exact, sincere and unbiassed. It is likely that the reports will encourage the pupils to put forth their best endeavour to win the approbation of both their teachers and their parents.

These Progress Reports may be half-yearly or term reports. They may be supplemented, if possible, with generalised monthly reports. The points that need special note in these reports are conduct, general progress, and attendance. The following may be taken as a sample of the form in which report may be sent:—

Name of the School :
Report to Parents :
Scholar's Attendance, Conduct and Progress :
For the.....ending.....19
Name.....Standard or Class.....
No. of Scholars in Class.....Place in Class.....
No. of times the School was open.....
Time spentTimes late
Scale of Marks:—Excellent; Very Good; Very Fair; Fair; Bad.

Sub-jects.	Max. marks.	Marks obt.	Sub-jects.	Max. marks.	Marks obt.	Addi-tional Sub-jects.	Max. marks.	Marks obt.

Reading.	English
Writing	History
Arithmetic	Geography
Spelling	Needle-work
	Music, Dancing
Composition	Manual Training
Drawing	Conduct

General Remarks :—
Class Teacher.....
Headmaster.....

Open Sessions

Open Sessions, once a year, have been found useful. During these sessions the ordinary school work proceeds as usual, and the parents are invited to visit the school and see its working arrangements. The work done in the preceding months of the year may be exhibited. Such an open session is both a pleasure to the parents and a delight to the children.

Home Lessons

Home Lessons should be given with discrimination. Then they serve as useful adjuncts to school work. More than anything else they represent "the Projection of the School into the home." They help to show parents the reality of the progress the children are making. And further they render material assistance in the direction of private effort, without which self-reliance and resourcefulness are an impossibility.

The work given should refer generally to the application of what has been already taught at school. And, it should never overstrain the children. So the home lessons ought to be such as can be mastered in time varying from twenty minutes to an hour at the worst.

It is also desirable to set such work as is in the direction of interests outside the scope of the school curriculum. One child likes history or language. Another child, drawing or handicraft. And a third one likes Botany, and so on. It is wise for teachers to watch the interests of children and give them encouragement. But this should not be sporadic. Steadfast work gives an added zest to both play and work.

Home work may well be reading, memorizing passages and poems, drawing or handiwork, mathematics or map-drawing. It may be in any subject that excites interest in the individual. Preparation of a scene or a play for a coming school or class-room performance will sometimes move a whole class to voluntary home activity. But time must be allowed. All rush should be avoided. As for infants, it should be noted, home lessons are altogether out of place.

Meals for Children

In many urban schools underfed and ill-clad children are not uncommon. Sickly complexions, pinched faces, emaciated limbs, and other outward signs of the lack of proper nourish-

ment are quite frequent. A hungry child is unfit to receive the full benefit of school. He is subject to disease. In such a case the demands of school work are a further drain on the nervous system.

Cases like the above are the opportunities for the teacher to render service to the poor pupils, to feed the hungry and clothe the naked. It is true that the teacher himself is poor, but it is open to him to seek assistance elsewhere. Perhaps he seeks the help of an Annadana Samajam, or forms a Poor Boys' Fund. Or, it may be, he persuades the rich boys to help their poor fellow pupils with some articles of clothing. But all this should be done very unobtrusively and with the assistance of the headmaster. Special care should be taken to see that no child receiving help in clothing or food feels in any way degraded. "The food should be the manna in the wilderness."

The School Library

The Library ought to be looked upon as indispensable to the school. H. G. Wells states, "a school without an easily accessible library...is really scarcely a school at all—it is a dispensary without bottles, a kitchen without a pantry".

It is a good idea to have two rooms for the purpose of serving as a school library—one for recreative reading and the other for study, both furnished, if possible, with low tables, chairs and book-cases. In the Study Room lessons are studied, compositions written, and other kinds of work done. The other room should contain books which may be taken home, one at a time, or which may be used there.

There should be a good collection of simple story books, well-bound and suitably illustrated. The books ought to be printed in big type. Attractiveness should be the chief motto in selecting books for the Library. There should be a set of

the Book of Knowledge, Children's Encyclopaedia, and History of the Peoples of Many Lands, all of which are profusely illustrated, so that with the help of the teacher the child may have his curiosity to know things roused.

As Wren points out, the boys must not be *driven*, but *drawn* to the library. There is enough of instruction in the classes. And so let the boys get in the Library something for their imagination, and for their character. The order so frequently given, "Don't waste time looking at that picture," should be changed to "Study the picture carefully and tell me what you see." A change from the "deadly depressing dullness of routine" is always "a joy and a blessing." Moreover the evils of collective teaching may, in the Library, be corrected to some extent by giving an opportunity to the boy to read silently the type of book and subject which most appeals to him.

The books in the Library should be catalogued and arranged according to the standards of the school. There should be as many book cases or cupboards as there are classes in the school. The books for the lowest classes should consist almost entirely of pictures, with either vernacular or monosyllabic English or Hindi explanations.

The value of a well-planned and attractive school Library is great. It is valuable in forming the habit of handling a book for amusement as well as for self-study. It helps also in forming character and in reaching the home. It is another way of the projection of the school into the Home.

Cub Packs and Scout Troops

Sir Baden-Powell discovered the great potentialities of young boys and hit at the system of Scout Training by which these potentialities may be developed to make the boy useful to himself and to others. The Scout Movement recognizes the necessity of relating the moral virtue to the simple affairs

of every-day life. It is thus a very good vehicle of character-building in *the play way*.

The following are the four aims of Scouting: (1) It aims at the self-development and character by the boy himself. (2) It attempts to make him useful in his particular way of making him a handicraftsman. (3) It aims at the highest ideal of 'service' to mankind. (4) It conserves and cultivates the boys' physical health.

Children under twelve years may be prepared for forming what are called "Cub Packs". They are called Cubs instead of Scouts. There is great scope for organizing Cub Packs in the Elementary Schools and thus introducing elements of Scouting.

The training in a Cub Pack increases and cultivates the boy's intelligence, his powers of observation and his general physique. It fosters the sense of honour by means of the Scout Promises and Laws. The Scout Games give him the sense of discipline. The Patrol System ingrains in him a sense of responsibility and duty. The award of badges and flags and medals encourages self-development and resourcefulness. Religious tolerance is fostered in the Scout as boys of different nationalities, creeds and communities and religions belong to one great Brotherhood of Scouts. As every Scout or Cub is expected to do a *good turn* every day, ideas of service to others get ingrained in him. Thus we see that as scouting gives excellent training to body and mind, it forms a substantial part of the education of the boy. For further information on this matter one may refer to Sir Baden-Powell's Book of Scouting.

Junior Red Cross

The Junior Red Cross is another organization intended to help the boys and girls to lead healthy and useful lives. The

main object of the organization is training to serve the sick and help the needy.

The Member of the Junior Red Cross wear a Red Cross Button which indicates that he is willing to serve the sick and help the needy to the extent to which it is possible for him to do so.*

Awards of Monitorships

In most good schools posts of honour carrying monitorial duties of the character of routine management of the class or associations or teams of players are usually conferred on highly deserving pupils. These posts need not be confined to the select few only but may be passed on by rotation from individual to individual, occasionally elected by the other boys.

School Lists, and the Honour and Merit Bond

Another stimulus to industry and general progress is the School Lists giving the names of pupils who have distinguished themselves. These lists also serve to maintain a standard of high aim when that has been once reached.

The Honour and Merit Bond is a framed board, sometimes of the form of a shield, which is hung on the walls of the school and on which are recorded the names of pupils who have obtained scholarships of merit, and also the names of pupils who have performed any noble acts in their own way. These records serve to stimulate useful impulses. They serve also to impress upon the pupils the corporate life of the school, and to give it an historical interest.

* Pamphlets, both Telugu and English, containing detailed information about the forming and working of a Branch in your school may be obtained on writing from the Honorary Secretary, Junior Red Cross, Monteith Road, Egmore, Madras.

The School Motto

It is a good thing for each school to have a motto of its own. It should be a very simple one, and should be such as to appeal to each one of the pupils.

Such a motto, if selected properly, serves three purposes :—

- (1) It helps to give the school a well-defined individuality. It adds to its life a marked trait that distinguishes that school from the others.
- (2) It crystallises, or puts in a nutshell, “ the central point on which the school’s moral teaching hangs.
- (3) It acts like a strong cement in binding its units together.”

A phrase giving clear definition to a great principle will hold a multitude of persons together, and transform them in aim into a homogeneous whole. “ The school should be a symbol of an eternal unifying spirit.” (Jordan).

The following may serve as examples of school mottos :—

- (a) Union is strength ; (b) Love is Divine ; (c) Life, Love and Light ; (d) “ Of such is the Kingdom of Heaven ” ; (e) “ These are my Treasures.”

The Flower Show

The pupils may be encouraged to grow flower plants at home and exhibit the flowers at the annual show, which may be held sometime about the month of December in the school compound. Prizes may be awarded for the best efforts in plant-growing. Special prizes may be given for plants grown from seeds by the youngest of the children in the school.

Charka Spinning

It is also useful to initiate children in the art of Charka Spinning and even weaving as is so successfully done in the Basic School of New Education at Sevagram.

Picture Collection and Picture Painting

Children will take great delight in collecting pictures. So every pupil may be encouraged to prepare an album consisting of cuttings from Newspapers and Magazines, and occasionally give prizes for the best collections. They should be helped in sorting the pictures carefully. This is one of the excellent hobbies for children, and it will help not a little in developing their aesthetic tastes.

Children also delight in doing Fresco Painting and Drawing on walls and in the drawing books.

Songs and Folk Dance

Children may also be encouraged to sing. Such of them as have an inborn taste for music will themselves pick up songs and sing them. And it will be a delight to their class-mates and their teachers to hear them singing. The best time for songs being sung in the school is the morning time when the classes assemble and start work. It is an excellent beginning of the day's work and a source of inspiration for both the teachers and the taught.

Folk Dance combines self-expression and music. Both children and adults take delight in all forms of Folk Dance, and in the New School there are plenty of opportunities for this as may be noticed at Sevagram Basic School.

The School Journal

A printed School Journal is possible only in large schools. But, in small schools, a typewritten and Rotary multiplied sort of Journal may not be impossible. Its advantages are the following :—

(1) This is the medium through which teachers may convey necessary information to both parents and children.

(2) Secondly, it affords scope for the self-expression of the pupils. It is an incentive to them to think and to write, not on topics set, but on topics suggested or chosen. When composi-

tions of children who have real merit are inserted in the journal, they are a great encouragement to the writers and serve as examples for the other pupils.

(3) And lastly, the journal is a monthly and a quarterly message from school to home.

The School Journey

A school journey is a journey of a group of children in charge of two or more teachers to a place of geographical, historical, economic or aesthetic interest. The visit may vary in length of time according to the specific purpose and the circumstances. Many weeks beforehand the headmaster may send a communication to the parents announcing the object of the journey and giving the probable charges and expenses.

Each child may be supplied with a typewritten guide-book giving the following information :—

(1) The personal necessities of the outing, and general instructions ; (2) the times fixed for starting and returning ; (3) things to be seen on the way—*e.g.*, natural phenomena, centres of industry, public buildings ; (4) programme for each day with brief notes on objects of interest ; (5) Geological notes about hills, rivers etc. ; (6) a list of the members of the party ; (7) individual cash account, giving spaces for receipts and expenditure ; (8) blank pages for personal remarks by the pupil.

Suitable talks may be given by the teachers at the locality visited. The help of gentlemen of the locality may be sought for directing the party to places of importance, architectural, historical, natural or economical.

The notes made by the boys may be something like the following :—

(1) We traced a stream from its source to its entry into the main stream ; (2) We climbed hills over 1,000 feet high, and noted the countries seen, elevations and depressions, towns.

and villages ; (3) We searched for fossils and brought home a small collection ; (4) We visited places of historical interest, such as the ruins of a Buddhistic “ mutt ” ; (5) We read an old copper-plated inscription ; (6) We visited the Sugar Factory at Samalkota ; (7) We enjoyed boating ; (8) We cooked and enjoyed a picnic at Pichica Lanka, etc., etc.

It is of advantage to apply to the Railway Company and get concession in the rates for travelling. It is good that both the teachers and the boys carry cameras and at the close of the journey to prepare a descriptive photo album, which may be preserved as a token of the happy memories of the trip.

Such trips have some very good results : (1) They secure cordial relations between teachers, pupils, and parents. (2) They sometimes lay the seeds of life-long friendship among the pupils themselves. (3) They rouse up in the pupils exceptional interest in geography, geology, topography, and local history. (4) They have a strong tendency to improve discipline and tone. (5) Apart from its immediate aims, the school journey secures the eager help of parents for the school in social and educational activities and acquaints children with the wider amenities of life. As Bray says, “ as a means of securing wider educational opportunity it is destined to be increasingly employed.”

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CHAPTER XXXVII

COMMON FAULTS AT SCHOOL AND THEIR REMEDIES

The treatment of common faults at school depends on the general tone and discipline of the school. The higher the tone the fewer will be the faults, and greater the ease of dealing with them. It is a mistake to suppose that there should be no faults at all in school children. It is again another mistake to suppose that punishment is the only remedy for faults.

Two main principles of correction should be borne in mind by the teacher. (1) The offender must know clearly how he is wrong and in what point he is in the wrong. (2) He must be induced to amend it by sympathetic persuasion and appeal to his sweet reasonableness. Severity must be avoided as far as possible. Reproof and temporary deprivation of the privileges of the class room are the only two remedies which, I think, are necessary for correcting faults in school children. If these fail, then it should be supposed that something is wrong in the school itself, either in the staff or in the organization. And, speedy steps may be taken to change these.

Unpunctuality

This fault may arise from any one or more of the following causes :—(1) Accident, (2) Indifference of parents or pupils, (3) Temptation, (4) Habit.

The following remedies may, with advantage, be adopted.

(1) When accidents become numerous, it means really that the habit of late coming is being formed. The remedy is for the teachers themselves coming in time, setting punctuality as a subject for composition lessons, reproof, making lessons interesting and beginning school work with songs.

(2) Indifference on the part of parents may generally be overcome by a request from the teacher to send the children in time and by seeing them and telling them about the need for punctuality in their children if they mean seriously their being educated. As to indifference on the part of the pupils themselves I cannot think of any remedy excepting talking to them and making them realize how their unpunctuality is a serious hindrance to their own progress, to the progress of the lesson and to the school progress, how it is a disgrace and how it implies serious effects on the pupil's future prospects in life.

(3) Temptation may be due to some local attraction like a circus, fair, etc., or to bad companions. If this happens occasionally in a pupil, I would ignore it. Perhaps this is good. But when it becomes a serious thing by continued occurrence, then steps should be taken to warn the child from bad companions and appeal should be made to his sense of duty.

(4) Habits of lateness should be eradicated at the earliest opportunity. Home influence, when possible, should be enlisted. The quarterly report to the parents should contain an item regarding late coming. I do not think that detaining the late comer after school hours is a good remedy. This was an unhealthy practice of the Principal of a Training College that I knew. This creates an aversion for the school and leads the child to think that it is something like a prison house.

I do not think that rewards for punctual attendance are of any good. Punctuality ought not to be considered as a special merit. But unpunctuality should be considered as something that cannot be tolerated in decent places.

Truancy

Truancy is a further development of 'unpunctuality'. Each case should be dealt with on its own merits. I think

that deprivation of playtime, detention after school hours with or without impositions, create a nausea in the pupils at the very mention of the name of the school. Thus by these methods the evil is aggravated but not remedied.

The way of overcoming this fault is making the school and its work as attractive as possible. A kindly feeling should be developed between the pupil and the teacher. The timetable should be such as to afford variety and rest for the pupils. The children should be made to feel that it is a pleasure and a privilege to be at school. Parents' co-operation may also be secured with advantage. The practice of giving marks to pupils for their preparation for the lessons helps to remedy this to some extent. *Attract* the child to school. *Do not drive* him there. If, by these means, you cannot remedy the fault, advise the parents to change the school and see. Threat and fear should never be used. It is always *LOVE* that conquers and opens the way for *SIGHT*.

Idleness

This may be sometimes due to weak health. In this case the work should be lessened and medical treatment should be advised.

This fault may sometimes be due to defective class-management. In this case the idleness is rather in the way of *wrong occupation* than mere inactivity. Useful and interesting work set is the means by which the pupil's attention may be drawn from mere amusement to work. Detention, heavy tasks and corporal punishment are useless.

Cruelty

This is due to ignorance, thoughtlessness or curiosity. Some children are cruel on account of harsh treatment at home or school. Some are fond of bullying, fighting and inflicting needless suffering on the weak and on the dumb.

animals. In all these the children do not realize the pain involved in their actions. They should be made to see this and sympathise with the dumb and the weak. The teacher's manner and character and his consideration for others and for the low, and his easy and natural talks about the beauty and sweetness of love with examples and stories are among the best corrections of this fault. The love of Sibi for a dove, the love of Buddha for a swan, the love of Dharmaraja for his dog and the love of Sree Rama for the so-called low-caste woman, Sabari, and the boat-man Guha, the love of Sreekrishna for cows, and above all that of Jesus for the leper and the sinner, are among the best examples of love for all living things, high or low.*

Heedlessness

Carelessness is a common fault. Pupils forget books or pencils, transcribe incorrectly, make needless omissions and mistakes. They put ink dots on copy books, and leave books, caps, shoes and umbrellas in wrong places. These are everyday occurrences. But these trifles should be checked by constant supervision and careful attention to details.

Bad Manners

Bad manners are due to defective home-training, ignorance, thoughtlessness, or bad companions. This fault appears in various forms, self-assertiveness, disrespect, bad language, wilful damage to school or other property, stone-throwing, and general misconduct.

The teacher's influence and example are the strongest forces for inculcating social virtues. He should always be courteous and well-mannered. He should make them under-

* Occasionally telling the pupils such simple stories as are mentioned here go a long way in deepening the feeling and broadening the heart of the young ones.

stand that good conduct and courteous language are more important than mere intellectual ability. He should discourage all rudeness in language and behaviour, and should inculcate habits of self-respect, courtesy, considerateness and general refinement.

(1) The influence of good literature should be brought to bear on the pliable minds of the pupils. (2) The Red-cross and the Scout movements are of much use. (3) Occasional class-excursions are also useful as a means of cultivating kindly social relationships. (4) If the teacher occasionally enters into the games of the children, the need for corrections for rude conduct will become less. (5) Careful and constant attention should be paid to school walls, fences and benches.

Hasty Temper or Petulance

This is mainly due to lack of self-control. It is generally roused by motives of spite, jealousy, or supposed unfair treatment. Under its influence the child may commit breaches of discipline, which he would not have done in calmer moments.

On these occasions, neither punishment nor argument is of any use. So the teacher should keep quiet then and wait to talk to the pupil later. It is best to send the offender to another room and enforce silence on him. This serves to give him time to consider the folly of his conduct. After some interval the pupil may be given a serious talk about the matter. It may be pointed out to him that uncontrolled anger is dangerous, that it exhausts the energies, causes pain and annoyance to others, and breeds uniform dislike and distrust. The child's higher nature must be appealed to. In this way he may be helped in his effort to be the master and not the slave of his passions. These means are generally enough to check the fault and prevent its repetition.

Untruthfulness

This fault may spring from different causes like fear of punishment, desire to gain unfairly some favour to overcome some obstacle, or from deceit.

The teacher must set an example of the strictest integrity both in word and act. He should also show the pupils that he is prepared to believe them if they do not give cause for distrust. It is not good that the teacher should continuously distrust his pupils and show to them that he believes that pupils are generally untrustworthy. Trust is the best of relationships. And so, unnecessary suspicion on the part of the teacher tends to lead the pupils to confirm that suspicion. Trust evokes trust and tends to increase truthfulness.

In seeking to check the fault of untruthfulness the teacher should look beyond the untruth itself and deal with the motive which prompted it. The pupils must be made to see that lying and deceit are cowardly and wicked, that the liar is despised and distrusted by all, and that truth and honesty always pay best in the end.

The falsehoods told by some children are often due to severity on the part of parents or teachers. A child ruled by *fear* soon becomes proficient in cunning and deceit. So, the less severe is the treatment of pupils, the more honest and truthful they are likely to be. Exaggeration may be checked in some degree by fostering habits of careful observation and exact description.

Copying

This is due to the fault of the teacher, or of the pupil himself. The child may copy on account of *ignorance* which is due to the failure on the part of the teacher to explain the lesson properly and clearly. Or the child may do so on account of his own laziness.

Copying should be treated as a serious defect and should be checked. Its dishonesty and evil consequences should be clearly pointed out. The unwisdom of the fault should be explained. The pupil loses the benefit which the exercise would have brought him if honestly done. And further he gives the wrong impression about himself to the teacher who would otherwise take more care about his teaching.

Any seating arrangement that removes the temptation for copying may be adopted. Too much of vigilance in supervision is not a desirable thing from the very highest point of view. That destroys trust and encourages pupils to discover chances of deceiving when supervision is not strict. The best thing seems to be so to train the pupils as would make it morally impossible for them to copy or to deceive even though the teacher is not bodily present. His spirit, the spirit of trust and confidence, should so thoroughly permeate the class-room atmosphere that deceit will be altogether out of the minds of pupils. So the surest plan for prevention of copying is to cultivate a high moral tone in the class, and to lead the pupils to live up to it.

Obstinacy

Timidity, fear or physical weakness should not be mistaken for obstinacy or stubbornness. In these cases the child needs help and sympathy.

Real obstinacy sometimes arises from harshness in the teacher's manner, wounded vanity, a conviction that the child is in the right or from a desire to have his own way, joined with the hope that by steady opposition to authority he may succeed.

From whatever source the fault arises, it should be overcome steadily but surely. No hasty step should be taken, and a contest with the offender should be avoided. He should be isolated from the class for sometime and should

be given time to reflect. A sense of shame and regret should be roused in the pupil. The more firmly a teacher's authority is established, the more rarely will faults of this kind occur.

Stupidity

J. H. Boardman's Practical School Method includes stupidity among the school faults. Though this inclusion appears to be a bit funny, there is no doubt that stupidity is not a phenomenon altogether absent in the class room. It is said that this is so.

Stupidity is of two kinds, natural or acquired. Natural stupidity is due to improper and uncivilized environment in which the child is born and bred up. The only remedies available are kindness, patience, and attractiveness. There is no doubt that sometimes LOVE lights up a dull face and attractive teaching awakens morbid brains to life and activity.

Timidity ought not, however, to be mistaken for stupidity.

Very often stupidity in children is acquired, and the fault lies with the teacher. Harsh discipline most often breeds stupidity. Sometimes the child is improperly classified or too hard lessons are given much beyond his mental capacity. Or, the teaching may be insipid and uninteresting on account of want of preparation, illustrations and experiments. The questions may be badly framed and carelessly put. And there may be a general want of skill and encouragement. Or, it may be that the impatient teacher neglects the dull boy. In all these cases, kindness and patience, and the art of attractive teaching go a long way in quickening the intellectual life of the less fortunate of the flock entrusted to the Kind Care of the teacher.

Tale-bearing

Tale-listening has undermined the reputation of several teachers. Tale-bearing in the pupils is the result of this

fault in the teacher. The best cure for tale-bearing is refusal to listen to tales told against others. These are not merely faults, but sins that have their origin in want of love for the neighbour. They are the signs by which you may know that the school atmosphere is contaminated by unkind and uncharitable thoughts. The darkening mists of tale-bearing, however, disappear before the sun-rise of Charity.

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CHAPTER XXXVIII

SUGGESTION: ITS IMPORTANCE FOR EDUCATION

We speak of a suggestive teacher, a suggestive book, a suggestive picture, or a suggestive situation. We speak of these as *suggestive* when they make a deep impression on us, when they set going a train of thought, which refuses to be quieted until it has worked itself out to a satisfactory conclusion, and which gives us no rest until we have altered our aims, our circumstances, and even our characters, so that the idea suggested may the more easily become realized.

These are the teachers and books that count. Other teachers are hired like waiters and perform their duties like hirelings. Other books are bought and sold like seers of tamarind or jaggery. But the real teacher and the real book are very rare. We treasure them when we find them and understand, and we part from them reluctantly. What makes them so valuable to us is that subtle elusive quality known as *suggestion*.

Wherein lies the magic of suggestion? What is the meaning that underlies the term "suggestion"? What are its conditions and what is its importance for education?

THE ESSENTIAL FACTORS OF SUGGESTION

The Conditions under which the Suggested Idea arises

A suggestive idea must possess energy. It has indeed more energy than any other idea. The suggested idea, with the peculiar energy which characterises it, arises under certain definite conditions of its own.

Personality

(1) It must be introduced by a person who is trusted, loved, or feared. Or it must be introduced under circumstances that inspire these sentiments. Or it must be introduced in a tone of voice or in a manner that the subject has always associated with ideas that are to be acted on or believed. One or other of these qualities, or more often a combination of them, is an invariable characteristic of the person who is suggestive. In other words, a *suggestive person* may be one who can set up in another person a state of emotion sufficient to produce an unstable and easily dissociated condition of mind, and thus to inhibit the rise or the development of contrariant systems.

Reaction : Repression and Avoidance of Suggested Idea

(2) The idea must be introduced so that reaction is not set up. An idea that initiates a strong critical reaction will not be suggestive. Reaction may be set up in two ways : (a) When an idea is presented to me that is wholly incompatible with my mental content, my sentiments, and my aims, it is immediately rejected. For example, if I am bent on becoming a merchant, a suggestion that I should become a preacher will not be favourably received. (b) If the idea, though not very antagonistic or possibly neutral, is introduced in too great a quantity or too persistently, this may defeat its ends. The nervous centres which are excited by feelings of elation easily become fatigued, and the succeeding state is one of mental depression. Boredom and listlessness may set in. " This may be avoided by bringing forward the idea very gradually. If possible it should be so introduced that its very insufficiency makes the mind ask for more. The most suggestive teacher is he who makes his pupils feel that he is keeping back from them something of value that they can have if they ask for it and are worthy

of it. The suggestive book is often one that just glances at a certain topic, then deals with other matters, and then returns skilfully to it again. The suggestive idea may thus derive some of its energy from being introduced marginally, and in this respect is unlike the ordinary idea whose energy depends on its filling the centre of consciousness.

Reaction may be either (a) *repressed*, or (b) *avoided*.

(a) The suggestive person does not always prevent the contrariant idea from coming into consciousness, but he inhibits it at an early stage by the emotional tone which he induces. Though the mind is first conscious of the feeling of antagonism, it gradually subsides. Such an emotional tone produced by a good speaker or teacher gives rise in the pupil to an unstable condition of mind, which is, therefore, easily dissociated and influenced by suggestion.

(b) New ideas can be introduced so discretely that no reaction is aroused, that sleeping dogs can be let lie, and the subject remains sublimely unconscious that he is being "got at". The indirectness is increased when dissociation takes place under the influence of a strong conative process, when the mind by sheer concentration on a certain system of ideas, ousts and inhibits other systems, including those of criticism and contrariance. If, for example, an idea A be introduced in company with a conative series of ideas X, Y, Z, of which it does not form an essential element, though it may stand in some relation to it, the concentration of the mind on X, Y, Z, will render impotent the system that might criticise and inhibit A, and A thus obtains a suggestive value.

Advantage of the Indirect Method

There is an *advantage in this indirect method*. If the new idea can be introduced almost unnoticed so as to lie latent for a period and then to assert itself, there is every chance that the pupil will look upon it as originating with himself.

In this case he is little likely to bring contrariant ideas to the front, as they will be inhibited by his own feeling of self-esteem. When auto-suggestion of this kind can be secured, it is probably the most effective form of suggestion.

Suddenness

There is yet another condition that furthers the suggestiveness of an idea. This is the suddenness with which it is presented. "A new idea, presented to the mind which is unprepared for it, by virtue of the slight shock that it administers, develops a high degree of energy if it is sufficiently vivid, and either immediately or later on, after a period of existence as a latent idea, becomes suggestive and dominating.

The Personal Qualities that tend to give Suggestive Force to Ideas

Certain personal qualities are essential to the teacher in his relations with younger as well as with older boys. They are necessary for indirect no less than for direct suggestion.

(1) Self-control and Reserve

Unless a man can first control his own ideas and impulses, he will be unable to influence those of others. Signs of weakness or self-indulgence of any kind are easily discerned by the thirty pairs of eyes that daily scrutinise a master's movements. This self-control must extend to his personal relations with his pupils. It is not good that a master should be too familiar with his class. They should feel that he is a friend, but should not forget that he is a superior. A constant exercise of reserve will give great weight to his views and sentiments when he discloses them.

(2) Inscrutability

A master about whom boys are never able to make up their minds, who remains always to some extent a sealed book to

them, will keep them on their mettle and in an impressionable state by the slight element of uncertainty involved.

(3) Masterfulness

The affection that is based upon a wholesome awe is that which the master should seek to inspire. A variety of causes contribute to the composition of the quality of masterfulness.

(4) Capacity to Imagine and Feel Keenly

No device of teaching or of manner, no reserve of information or of sympathy, will promote suggestion unless the idea that is to be suggested is first vividly imagined and keenly felt by the teacher. Imagination and feeling are both contagions. This contagion makes itself felt through manner and play of features, but most of all through good verbal expression. It is necessary that a teacher should speak well. But first the idea must be there. Otherwise the power of expression is useless. School teaching requires a fusion of conviction and utterance. Lord Acton is said to have a magnetic quality in the tones of his voice and a light in his eye. Therefore, his conviction took possession of his whole being, and seemed to enfold it in its own burning flame. His lectures had amazing force and vivacity. He pronounced each sentence as if he were feeling it, pointing it slightly, and uttering it with measured deliberation. His feeling passed to the audience, which sat enthralled. It was in truth an emotional performance of the highest order, a wonderful work of art such as, in all likelihood, will never again be witnessed.

(5) Possession of Sufficient Knowledge of the Subject and Sufficient General Culture

Boys appreciate knowledge in a teacher. If once they take it into their head that he is exceptionally well-informed, they listen with respect to what he has to say.

(6) The General Technique or the Business-like Habits in the Class-room

The prompt and neat performance of routine work, punctuality of appearance, regularity with lists of marks, definiteness in the demand for home work—are all necessary for efficiency. It may be doubted if a teacher who neglects them will, in the long run, be suggestive, no matter what his gifts may be.

(7) Athletic Qualifications

A teacher should be able to interest himself in the pursuits of his pupils like games and out-door exercises.

For ordinary mortals the above are the permanent conditions of suggestive teaching. As for the born teacher, whom we rarely see, we need only say his gifts bring with them responsibility as well as freedom.

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CHAPTER XXXIX

INFLUENCE OF SUGGESTION AND IMITATION

What is Imitation ?

If an action is *suggested* by one person, it may be *initiated* by another. And so, the words "Suggestion" and "Imitation" are often used as if they were correlative. But this use of these terms is a loose one.

"Imitation" is a term generally applied to movements. I imitate some one's manner of walking, or of eating, or his habits of speech, or of facial expression. But I do not talk of imitating his feelings or his wishes.

For general purposes, however, the meaning of imitation is extended to a community of ideas and wishes. And in that case it is possible to say that imitation and suggestion appear to be the same process viewed from the standpoint of the active and the passive agent respectively.

Stages of Imitation

As we rise from instinctive to conscious processes imitation goes through several distinct stages :

(1) *The Instinctive Stage*.—Here the agent is wholly unconscious that he is imitating. I go to a hat-shop and select a certain hat. I am quite unaware that my selection is influenced by the style of hats worn by my friends.

(2) *The Conscious Stage*.—Here it seems natural to do what those like us are doing. And though we have a full consciousness of our action, very little attention is given to it. When I buy a hat of a certain kind because I see that my friends have similar hats, I am fully aware that in doing so I resemble them. But I do not necessarily act thus in order that I may resemble them.

(3) *The Purposive Stage*.—Here I actually desire to imitate. This desire may be actuated by one of three motives : (a) For the sake of Imitation itself ; (b) For practical ends ; (c) For reasons of self-esteem.

How far is Suggestion Correlative

Let us see how far it is legitimate to use the term “ Suggestion ” as the correlative of all the three stages of “ Imitation ”.

At the lowest stage unconscious imitation is very like the correlative of indirect suggestion. But this likeness is only partial. For in indirect suggestion the boy's unconsciousness is not of the idea that is thus presented to him, but rather of the thought that his teacher wishes him to adopt it.

In the same way we may say that stages two and three are to some extent the counter-parts of direct suggestion, in so far as the agent feels a desire to act in a certain way, and realises to some extent whence it arises. It should, however, be noted that strictly speaking imitation takes place essentially among beings who resemble one another.

Teacher and Pupils

Imitation is between similars rather than between dissimilars. And it must be confessed that the teacher is different from the boys or girls whom he teaches. It must, therefore, be supposed that imitation is restricted here in its operation.

There is some difficulty with regard to the relations of the school master with his pupils. If the teacher is too familiar with them, and is by nature an inferior man, the boys, far from considering that relations of equality exist between him and them, rapidly class him as being a person who is worthy of no consideration, and who certainly ought not to be imitated. On the other hand, if he is a sturdy and able personage, the feeling of affection that the pupils have for

him is largely tinged with fear, and we are not always inclined to imitate those of whom we are afraid.

The Instinctive Imitation of Pupils

And yet it cannot be denied that boys and girls are to a great extent affected by a master's habits and modes of thought. But the imitation is instinctive. The pupil does not deliberately determine to imitate. He may by suggestion and teaching be induced consciously to act in a given manner, but this suggestion is not the correlative of imitation.

Emulation

Still less does the relationship of instinctive imitation that exists between the master and the boy lead to Emulation. The gulf between them is too great. We emulate not those who are greatly our superior, but those who are only slightly in advance of us—whose superiority may be disproved by a little effort on our part. Neither in the class-room nor elsewhere do pupils imitate masters with that imitation which leads to emulation.

How to produce a sentiment in a pupil

If it is desired to produce a sentiment in a pupil, the attempt to make him accept it or imitate directly will, in most cases, be fruitless. One method is to introduce it to him gradually, and this largely through imitation of the processes of which it has been expressed. The adoption of the form of expression brings with it to some extent the sentiment which produced the expression. And when once the sentiment in these is secured, it is a comparatively easy matter to intellectualise it, and to emphasise the idea in connexion with which it originally came into existence.

The Means and the End

Another thing to be noted is that it is not possible in a school for pupils to understand first the *end* and then to

imitate the *means*. It is necessary rather that the pupil shall be induced by suggestion to accept the earlier stages in a progressive series of ideas long before the true meaning of the progress dawns upon him, as it does at last when he reaches the end which illumines the pathway that he has traversed.

Two Factors in School Education

In school education there are two distinct factors: (1) the influence of the master upon his pupils working through *suggestion* and *imitation*, and (2) the influence of the pupils on one another working through *imitation* and *emulation*. Every word that the master speaks is spoken, not to one boy, but to a number. Its suggestive force, therefore, will be intensified by the link of imitation among similars. Every process that he imitates will be developed under the influence both of imitation and emulation.

Contagion of Ideas and Emotions

There is such a thing as contagion of ideas and emotions, what may be called the *Imitative Contagion*. This phenomenon may be noticed in any gathering of human beings. Some emotion is communicated to some members of the audience and spreads to all and becomes the common emotion largely through the motor imitation of the expression of emotion. The larger the society the more intense becomes the Common Emotion. Even among cold-blooded peoples imitative contagion carries an idea through a community like wild-fire. Quiet, moderate-minded citizens in times of political excitement become blind fanatics without judgment. Children as well as adults are subject to such infection. In 1212 there was the remarkable episode known as The Children's Crusade. About 50,000 children of all ages, many under the age of 12 years, started on the expedition. Imagine the

ridiculous and cruel extent to which human nature may be degraded under the baneful influence of a bad Imitative Contagion.

It is the presence in schools of this factor of contagion that makes school education so immensely powerful for good or for evil. A large class certainly increases the work of the teacher. But an observant teacher knows well how much more interesting it is to teach a large class than a small one, and how much stronger the suggestive element can be.

It has been said that it is better that the young should be taught together and in large classes, since better results and more pleasure are to be obtained when one pupil serves as an example and a stimulus for another. "For to do what we see others do, to go where others go, to follow those who are ahead of us, and to keep in front of those who are behind us, is the course of action to which we are all most naturally inclined." Young children, especially, are always more easily led and ruled by example than by precept. If you give them a precept it makes but little impression; if you point out that others are doing something, they imitate without being told to do so.

Thus the master's suggestive influence is rendered far more powerful by the tendency of boys to imitate one another. "He is like one who speaks below his breath in a labyrinthine cave, to find that his words are bandied from rock to rock and return to him with added volume."

Teacher's interest in the individual

But while much of the master's influence may depend on the fact that he is dealing with a class, and while he should never forget this, the effect of such human association will be lost unless on every occasion the boy believes that his teacher is interested in him *personally* and *separately*.

Teacher's touch with the individual

To teach a class as a whole is one of the tests of schoolcraft. A considerable amount of *formalism* and *mechanism* is necessary to promote discipline and insure impartiality, and these are the bases of good teaching. But discipline may degenerate into the *repression of the drill-sergeant*, if the teacher does not realize that his pupils differ very much in character. If he does not take the trouble to get into *touch* with the individual, he will not make each boy feel that he is a *friend* as well as a teacher. He will miss the countless opportunities of putting heart into a despondent boy and administering judicious snubs to a conceited one. Individually and collectively he will not get the best work out of his class. If the individuals are not affected, healthy contagious imitation between them is impossible. It is said that the success of Dr. Arnold in dealing with boys was due to his modest beginning with a few pupils at Laleham. He thus acquired the habit of realizing that each boy had an *individuality*, and that his business was to get into touch with it. As Prof. Keatinge says, without this *personal contact* there will not be the *reverberation of influence* that class teaching promotes, and the scope of suggestion will be correspondingly limited.

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CHAPTER XL

HABITS : THEIR FORMATION AND PLACE IN SCHOOL DISCIPLINE

Introductory

Every kind of mental or physical operation tends to become easy by practice. In addition to the faculty, there is a tendency or bias set up by repeated effort. This facility gained in any exercise and this tendency or bias to repeat the effort,—both these result from frequent practice. These help to form what we understand by *Habit*.

Instinct versus Habit .

Habits are the result of effort. They are acquisitions. They demand exercise before they are formed. . They are most effective for the purposes of control in the more advanced school life and after leaving school.

If, however, we watch the infant in whom habit as yet has no force, we cannot fail to observe that the child has certain natural powers or endowments. These natural endowments are called *Instincts*.

The following are some of such instincts : (1) *Activity*, arising out of the pleasure which accompanies the exercise of its various powers. (2) *Curiosity*, based upon the pleasure it feels in using its intellectual powers (mainly the senses at first). (3) *The feeling of Pleasure*, resulting from harmonious movements, from seeing objects beautiful in form and in colour, and from singing and music.

These instincts contrast strongly with Habits in the following points :—(1) Instincts are natural ; (2) They belong to the infant period as well as to the more advanced stage ; (3) They stimulate to effort rather than result from

effort ; (4) And yet, they form a very important element in the formation of Habit. Hence these instincts should not be repressed but directed. If directed they develop into very useful Habits. For example, *activity* controlled becomes *diligence*. Curiosity properly guided develops into a habit of careful *observation* and *even into scientific investigation*.

(1) The Habit of Obedience

How this Habit is formed ?

This habit is of the first importance in successful school control. School work increases in value as obedience is more complete and habitual. Imitation of school fellows and the timely checking of the tendency to obey definite orders contribute to the formation of the habit of obedience in children. The tendency to associate the orders of the teacher with instant effort to do what is told is developed by repeated acts of obedience. In time, the pupils' action becomes associated with the teacher's order rather than with the mere example of the other members of the class. In the end, the boy, instead of following the example of other members of the class, may become the most prompt to follow the order of the teacher, and being the first to obey, he sets an example to the rest.

Two important points

In forming this habit, it is important that the teacher estimates carefully the extent of the power possessed by the learner. His demands must not exceed the capacities of the pupil. And there is another matter which is worth mentioning in this connection. The formation of the habit of obedience is most easy when, on account of a regard for the teacher, there is a feeling of pleasure associated with the immediate performance of his wishes and commands.

The habit of obedience is perfect when there is no hesitation in following the command ; that is, when there is no manifestation of the smallest trace of opposition. The action thus becomes mechanical.

Value of School Rules

The usages of the school are best learned by actual practice. The exhibition of conduct and work as seen in the exercises of the different classes in the school will be far more potent in influencing the behaviour and effort of individual scholars than the mere multiplication of rules. It cannot, however, be denied that it is of use to hold up before the mind of the pupils just a few of the most general and important rules of the school. They should not refer to work and behaviour in classes which should be looked after by the class teacher. But they should relate to such general matters as attendance, home lessons, and general appearance, and behaviour. *The rules should be few. But they should be thoroughly understood and should be rigidly kept.* Otherwise they tend to the weakening of control.

The degree of direct obedience should vary with the age of the pupil and with his reason

In the infant stage commands must be frequent. During lessons the child must be kept in the presence of the teacher as self-directed effort is not possible at this stage. As the pupil advances, there should be opportunity afforded for more and more of independent effort. There should then be less of direct command. As the power of reflection grows and as the knowledge of principles of conduct become known, obedience should be rendered to what reason dictates and duty requires, rather than to what the teacher enjoys.

Reason and Obedience

To determine what degree of obedience it is just to require from children, we must always consider what degree of reason

they possess. Whenever we can use reason, we should never use force. It is only whilst children are too young to comprehend reason that we should expect from them implicit submission. The means which have been pointed out for teaching the habit of obedience must not depend upon teaching anything more than the mere habit. When children begin to reason they do not act merely from habit ; they will not be obedient at this age unless their understanding is convinced that it is for their advantage to be so. Wherever we can explain the reason for any of our requests, we should attempt it. But whenever these cannot be fully explained, it is better not to give a partial explanation. It will be best to say steadily, " You cannot understand this now ; you will perhaps understand it some time hence."

Whenever we tell children that we forbid them to do such and such a thing for any particular reason, we must take care that the reason assigned is adequate, and that it will in all cases hold good. Our pupils should distinctly perceive that we wish to make them happy, and every instance in which they discover that obedience has really made them happier will be more in our favour than all the lectures we can preach. We may observe that the spirit of contradiction, which sometimes creeps out in young people, the moment they are able to act for themselves arise frequently from slight defects in their early education. Children who have experienced that submission to the will of others has constantly made them unhappy, will necessarily, by reasoning inversely, imagine that felicity consists in following their own free will.

Hints upon giving Commands

The following hints may be noticed with regard to giving commands : (1) Commands should be brief in form. They should not be lengthy. (2) They should be such as to tend to secure the simultaneous movement of the entire class.

(3) They should be preceded by a call to attention. Some signal may be used for this purpose, as for example, the ringing of the table bell. (4) Commands should not be repeated. There should be no excuse for non-compliance with commands. (5) A command should never be accompanied by a warning or threat. (6) Unnecessary commands should never be given.

The multiplication of commands is a great source of weakness. A word of commendation given to a scholar, or a hint suggestive of improvement to the entire class, will often stimulate to effort more effectively than commands or endless fault-finding. "It is a healthy procedure in school tactics to have regard for good work and conduct rather than to have a constant tendency to spy out and expose little fault."

The Kind of Spirit that should Pervade the School

It is best that in the school the spirit of *friendship*, affection, *co-operation* and happiness prevails, *instead of the spirit of authority, commands, obedience and punishments*. The teacher and taught should recognise each other as *co-workers* in the glorious mission of Education.

(2) The Habit of Diligence

Conditions Favourable for the Development of Diligence

Diligence is the habit of steady effort. Every teacher who desires the success of his school should seek to develop this habit. Nothing tends more to disorder in a school than intervals of inactivity and idleness. The following are the conditions most favourable for the development of the habit of Diligence: (1) A well-arranged time-table providing a healthy variety and a regular succession of lessons. (2) A sufficient and competent staff to stimulate and direct the activity of the scholars. (3) Absence of regular application, which results in indifference and the weakening of the habit

of application. (4) The superintendence and example of an enthusiastic head. (5) Steady and continuous work throughout the year and not merely before examination. Fitful work followed by a reaction in the direction of loose and indifferent effort necessarily weakens the formation of this habit. (6) While children will have always something to do at school, it should be seen that light mechanical work and pleasant occupations should duly alternate with serious intellectual application. The above six are the conditions that contribute to the habit of diligence in pupils.

(3) The Habit of Self-Control

A school may manifest the habit of obedience almost to perfection. Every pupil may have utmost regard for the teacher's commands. The school may, as a whole, appear very quiet and orderly. There may also be a creditable amount of diligence manifested, and a satisfactory amount of work accomplished. And yet it is possible that in the school boys there is no sufficient development of the power of self-control.

Avoidance of too much of external control

It is possible that we erroneously control boys too much. We should see that boys are taught to control themselves. That is sound discipline. There is no good of obtaining obedience at the expense of life and energy. A listless body of school children, a dull school, is one of the saddest of sights. It is, perhaps, a good thing to do if we leave the class now and then for an interval of self-directed work. It is also good to leave the class for some time to see whether the pupils can control themselves and keep silence in such a manner as not to disturb other classes round about. A class, that can be noisy and yet that can maintain perfect silence in the absence of teacher after the school bell is given, should be supposed to have developed to a considerable extent the habit of self-control.

A teacher whose power over his scholars is great can best afford to cultivate a spirit of self-reliance in his pupils. His pupils need to practise this form of control if it is to be developed, and opportunities should be given for its exercise until the power of self-directed effort becomes strong and habitual.

(4) Habits of Neatness and Order

Want of Neatness

The mental activity of the school may be well developed. The diligence of the pupils may be abundantly apparent. Their power of independent effort may be clearly manifest. But, at the same time, the whole of this educational result is discounted by a want of neatness and order in the pupils' presentation of themselves and their work. The want of neatness is apparent in the arrangement of the school apparatus, in the papers distributed about the room, in the disposal of the books, in the personal appearance of each pupil, in the ink dots on the tables, the inscriptions on the walls, and in the style in which their work is displayed on paper.

Ways in which Habit of Neatness may be Developed

When once these abovementioned habits of disorder have been allowed to develop, it will be found difficult to displace them by habits of neatness and order: (1) In this matter, example is more powerful than precept. By an example of neatness a teacher can do much to stimulate orderly habits in his pupils. (2) And further, the school should provide receptacles for the collection of waste paper, and for the careful keeping of school books and appliances. (3) The occasional exhibition of a neatly-worked home lesson, a copy-book, or an examination paper, will do much to stimulate neat working throughout an entire class. (4) Constant vigilance on the part of the teacher will also assist in the formation of habit of neatness.

in pupils. These above four are the ways in which the habit may be developed. It is only by a neat and orderly presentation of themselves and their work that both scholars and teachers are best able to secure the fullest advantage of their labour.

(5) The Habit of Punctuality

This habit has a marked effect upon the orderly work of a school. And what is more, it will have a beneficial influence on individual character. Punctuality is "the soul of business". The habit should be formed in early life. With regard to the means that may be adopted for bringing about this habit, we have sufficiently dealt with the question under other heads.

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CHAPTER XLI

HABITS OF CONDUCT WHICH AFFECT THE TONE OF THE SCHOOL, AND WHICH ARE THE FOUNDATIONS OF CHARACTER

TRUTHFULNESS

Truthfulness in Speech and Thought

To produce the habit of truthfulness is one of the major aims of moral education. Real truthfulness is not in *speech* only. But it is also in *thought*. In fact the latter is more important. A person who lies with full consciousness of what he is doing is better than a person who first sub-consciously deceives himself and then imagines that he is being virtuous and truthful. Almost all the occasions which justify *lying* are occasions where *power is being used tyrannically*, or where people are engaged in some harmful activity. In a good social system and under good school conditions there is no need for lying.

Untruthfulness is due to fear, tyranny

“ Untruthfulness as a practice, is almost always a product of fear. The child brought up without fear will be truthful, not in virtue of a moral effort, but because it will never occur to him to be otherwise. The child who has been treated wisely and kindly has frank look in the eyes, and a fearless demeanour even with strangers ; whereas the child that has been subject to nagging or severity is in perpetual terror of incurring reproof, and terrified of having transgressed some rule whenever he has behaved in a natural manner. It does not at first occur to a young child that it is possible to lie. The possibility of lying is a discovery, due to observation of grown-ups quickened by terror. The child discovers that grown-ups lie to him, and that it is dangerous to tell them the truth; under these circumstances he

takes to lying. Avoid these incentives and he will not think of lying." (Bertrand Russell: On Education.)

Caution in judging children

In judging whether children are truthful or not, certain caution is necessary. Their memories are faulty. They often do not know the answer to a question when others think they do. Their sense of time is vague. The child may not know the difference between yesterday and a week ago, or between yesterday and six hours ago. It is curious that some discover late the difference between yesterday and tomorrow. When they do not know the answer to a question they tend to say Yes or No according to the tone of the question. Again they bluff sometimes without the least intention to deceive anybody. For example some child may say solemnly that he saw a lion in the College garden. And so for all these things grown-up should not think that any children are untruthful.

Trust

In fact children think that adults can be deceived. They think that their parents and teachers know a lot. Russell tells us that when his boy was three and a half years old was once given a number of chocolate Easter egggers. He told him that if he ate too much chocolate he would be sick, and having told him this, we left him alone. The boy ate too much and was sick. He soon came to his father as soon as the crisis was over with a beaming face, and said in a voice almost of triumph:—"I was sick, Daddy—Daddy told me I should be sick." He felt such pleasure in the verification of a scientific law. Since then he could be trusted with chocolates. Moreover he believed afterwards what was told by his parents as to what food was good for him. Thus no moral exhortation or punishment or fear is necessary. Patience and firmness are required.

When a child does lie, parents and teachers should take themselves to task rather than him. They should deal with it by removing its causes, and by explaining gently and reasonably why it is better not to lie. "They should not deal with it by punishment, which only increases fear and therefore the motive for lying."

The force of Example

Rigid truthfulness in adults towards children is absolutely necessary if children are not to learn lying. Parents and teachers who teach that lying is sin, and who nevertheless deceive others and lie to their children naturally lose all moral authority. Parents and teachers do not realise that children are astonishingly clear-sighted. Jealousies and envies, of which you are unconscious, will be evident to your child. He will discount all your fine moral talk. Never pretend to them to be faultless and super-human. The child will not believe you. And he would not like you any the better if he did.

Never threaten punishments you do not mean to inflict

It is extremely bad for the young to threaten them punishments which you do not mean to inflict. Dr. Ballard states this principle emphatically. "Don't threaten. If you do, let nothing stop you from carrying out your threat. If you say to a boy, 'Do that again and I'll murder you', and he does it again, then you must murder him. If you don't, he will lose all respect for you." It is particularly objectionable when people threaten something terrifying. This produces a state of dangerous nervous terror. And, in the second place, it produces a complete doubt as to all statements and threats by grown-up people.

Never insist unless there is really strong reason

Do not insist, except for good reason. But when once you have begun insisting, continue to insist. If you are

forced to threaten a punishment, let it be one that you are prepared to inflict. If you never insist without carrying the matter through, the child soon learns that on such occasions resistance is useless. And he learns to obey a mere word without giving further trouble. But it is essential to the success of this method that you should not insist unless there is one really strong reason for doing so.

Give children true answers to their questions

Children, whose enthusiasm is not suppressed, ask innumerable questions. Some of these are really intelligent questions. These questions are often wearisome. They are sometimes inconvenient also. But, whatever they be, they must be answered truthfully, to the best of our ability. If the child, for example, asks a question connected with religion, say exactly what you think, even though you think differently from other grown-up persons. If he asks you about Death, about the Sky, answer him. The "Book of Knowledge" is of immense help to you in this respect.

Even if the boy asks you questions that are wicked or foolish, answer him honestly. If he asks you about War and Hanging, answer him. Do not say to him, "You do not understand these things." Even if he fails to understand, your telling him will stimulate his intellectual curiosity.

Invariable truthfulness results in increased trust

"Invariable truthfulness to a child reaps its reward in increased trust." The child naturally believes what you say. He continues to believe till the contrary is experienced. A little experience of the truth of your remarks even, with regard to small cases enables you to win belief easily. Russell tells us that one day his boy wanted to paddle in a stream. He told him not to do it, as he thought there were bits of broken crockery which would cut his feet. But the

boy's desire was keen and so he was doubtful about the crockery. But when his father found a piece and showed it to him, he came entirely to trust him. If his father had invented the idea of crockery for his own convenience he should have lost his boy's confidence.

Conclusion

Let me conclude this note on the essential quality of truthfulness by quoting from Bertrand Russell. "We live in a world of humbug, and the child brought up without humbug is bound to despise much that is commonly thought to deserve respect. This is regrettable, because contempt is a bad emotion. I should not call his attention to such matters, though I should satisfy his curiosity whenever it turned towards them. Truthfulness is something of a handicap in a hypocritical society, but the handicap is more than outweighed by the advantages of fearlessness, without which no one can be truthful. We wish our children to be upright, candid, frank, self-respecting; for my part, I would rather see them fail with these qualities than succeed by the arts of the slave. A certain native pride and integrity is essential to a splendid human being, and where it exists lying becomes impossible, except when it is prompted by some generous motive. I would have my children truthful in their thoughts and words, even if it should entail worldly misfortune, for something of more importance than riches and honours is at stake."

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CHAPTER XLII

AFFECTION AND SYMPATHY

Affection is the essence of a good character

Affection is the essence of a good character. Love and knowledge are the two main requisites for right action.

Right love should be the natural fruit of proper treatment

The right sort of love should be the natural fruit resulting from the proper treatment of the growing child, rather than something consciously aimed at throughout the various stages. We have, however, to be clear as to the kind of affection to be desired, and as to the disposition appropriate to different ages. (1) From ten to twelve years old until puberty a boy is apt to be very destitute of affection, and there is nothing to be gained by trying to force his nature. (2) Throughout youth there is less occasion for sympathy than in adult life. This is due to two things. In the first place, there is less power of giving expression to it. And, in the second place, a young person has to think of his or her own training for life, largely to the exclusion of other people's interests. For the above reasons we should be more concerned to produce sympathetic and affectionate adults than to force a premature development of these qualities in early years.

Love cannot exist as a duty

Our problem, like all problems in the education of character, is a scientific one. It belongs to what may be called psychological dynamics. Love cannot exist as a duty. To tell a child that it ought to love its parents and teachers, its brothers and sisters is utterly useless, if not worse. Parents and teachers who wish to be loved must behave so as to

elicit love, and must try to give to their children those physical and mental characteristics which produce extensive affections.

A.

Parent's love: Parent's love should not seek response

Not only should children not be commanded to love their parents and teachers, but also nothing should be done which has this result for its object. Parental love, which the teacher's love should resemble at its best, differs from sex love in this respect. The essence of sex love is to seek a response. But it is not the essence of parental love to seek a response. A teacher's love also should not seek a response.

Do not make children intellectual slaves

Another thing to be avoided by teachers and parents is the desire to make child perfect intellectual slaves. To some degree the intellectual slavery in adults is due to early environment in which adults overpowered their minds instead of merely guiding them when they were young. That is why very few adults are capable of opinions other than those taught by parents or teachers. Such *intellectual slavery* can only be avoided by proper education. This form of excessive and scholastic influence ought to be avoided carefully, since in our rapidly changing world, it is dangerous to retain the opinions of bygone generations.

Free the children from the slavery of emotions and will

It is not only the intellectual slavery from which children should be free but also from the slavery of the emotions and the will. It is not good that children should be kept long in a state of helplessness and dependence, and to put off the time when the child can dispense with parental guidance. This state is called the state of being "tied to his mother's apron-strings."

Children should take the love of parents and teachers as a matter of course, like the air they breathe

There is no doubt that children have a right to warm affection from their parents. It gives them a happy, care-free outlook upon the world, and is essential to healthy psychological development. But it should be something that they take for granted, like the air they breathe, not something to which they are expected to respond. It is this question of response that is the essence of the matter. There will be a certain spontaneous response. And this is all to the good. But psychologically, parents as well as teachers should be in the background. The child should not be made to act with a view to giving his parents pleasure. Their pleasure should consist in his growth and progress. Anything that he gives them in the way of response should be accepted gratefully as a pure extra, like fine weather in spring. But it should not be expected as part of the order of nature.

The right attitude we ought to expect from children

We should have clear thoughts as regards the attitude we are to expect from children to parents and teachers. If they have the right kind of love for the children, the children's response will be just what they desire. The children will be pleased when their parents and teachers come, and sorry when they go. They will look to them for help in any trouble, physical or mental, that may arise. They will dare to be adventurous, because they rely upon their protection in the background. But this feeling will be hardly conscious except in moments of danger. They expect their parents and teachers to answer their questions, resolve their perplexities, and help them in difficult tasks. They like their parents, not so much for providing their food and shelter, but for playing with them, showing them how to do new things, and

telling them stories about the world. In the same way they do not like their teachers for the marks they give, and for the examinations they help them to pass, but for playing with them, showing them how to do new things, and telling them stories about life and the world. They will gradually realize that their parents love them. But this ought to be accepted as a natural fact, but not as a thing to be demanded. The child has no important function to perform in relation to his parents. His function is to grow in wisdom and stature. And so long as he does so a healthy parental instinct is satisfied.

B.

The wider question of affection and sympathy in general

Now let us come to the wider question of affection and sympathy in general. There is no possible method of *compelling* a child to feel sympathy or affection. The only possible method is to observe the conditions under which these feelings arise spontaneously, and then endeavour to produce the conditions. Sympathy is undoubtedly partly instinctive. Children are often worried when they see their brothers and sisters cry. They too cry. When their fellows are ill-treated they take up cudgels against the adults. When a boy saw his mother extracting a thorn from her foot, he said anxiously, "Does it hurt mummy?". She insisted that it did hurt her wishing to give him a lesson in not making a fuss. He then burst into sobs, just as vehement as if it had been his own foot. "Such occurrences must spring from instinctive physical sympathy.

Positive condition

This is the basis upon which more elaborate forms of sympathy must be built. It is clear that nothing further is needed in the way of positive education except to bring home to the

child the fact that people and animals can feel pain, and do feel it under certain conditions.

Negative condition

There is, however, a further negative condition. The child must not see people he respects committing unkind or cruel actions. If the father shoots, or the mother speaks rudely to the maids, the child will catch these vices.

Children need not be kept in ignorance of the cruelty that exists in the world

This does not, however, mean that children should always be ignorant of the cruelty that exists actually in the world. A truly robust morality can only be strengthened by the fullest knowledge of what really happens in the world.

Sympathy should be on the side of the defeated

History may be taught with all its wars and persecutions of innocent people. But in telling about these, sympathy should be with the defeated and the persecuted. You should emphasize always the wounds and sufferings produced. The child should gradually be led to regard both sides as silly men who had lost their tempers, and ought to have had nurses to put them to bed till they were good. These wars should be compared with quarrels among the children. In this way children should be made to see the truth about war, and to realize that it is silly.

It should be impressed on children that Evil always results from Ignorance, Lack of Self-control and Bad Education

If any actual instance of unkindness and cruelty comes under the child's notice, it should be fully discussed. It should be discussed in such a manner as to suggest that

the people who acted cruelly were foolish, and did not know any better because they had not been well brought up. It is only after the child grows sufficiently familiar with cruelty and deception in history and stories that he should be introduced to the evil in his surroundings. But always he should be given the feeling that evil always results from ignorance and lack of self-control and bad education,—and that evil can be combated by knowledge and self-control. It is not good to encourage the child to be indignant with *malefactors*, but rather to regard them as bunglers, who do not know in what happiness consists.

Right direction of attention and realization of facts

When the instinctive germ of sympathy is given, the cultivation of wide sympathies is mainly an intellectual matter. It depends on the right direction of attention, and the realization of facts which militarists and interested people suppress. This right direction of attention and realization of facts is done, not by suppressing facts, but by giving more facts. What applies to battles applies to all forms of cruelty. In all cases it is quite unnecessary to point the moral. The right telling of the story should be sufficient. Do not moralize, but let the facts produce their own moral in the child's mind.

Affection between equals

Now let us say a few words about affection, which differs from sympathy. While sympathy is general, affection is inevitably and essentially selective. We have already seen something of affection between parents and children. We shall now consider affection between equals.

Affection cannot be created: It can only be liberated

Affection cannot be created. It can only be liberated. There is a kind of affection which is partly rooted in fear.

Affection for parents and teachers has this element. In childhood affections of this sort are natural. But in later life they are undesirable. Even in childhood affection for other children is not of this sort.

Affection among equals is the best

Affection as to an equal is the best kind. It is much more likely to exist where there is happiness and absence of fear. Fears, conscious or unconscious, are very apt to produce hatred, because other people are regarded as capable of inflicting injuries.

Envy and fear are barriers to wide-spread affection

Envy and fear are barriers to wide-spread affection. These two prevent also happiness. The education of character should be designed to produce happiness and courage. Therefore it should be such as would liberate the springs of affection from these two poisonous weeds, Envy and Fear. More than this cannot be done. If you simply tell children that they *ought* to be affectionate, you run the risk of producing cant and humbug.

Make children happy and free and surround them with kindness

But if you make them *happy* and *free*, if you surround them with kindness, you will find that they become spontaneously friendly with everybody, and that almost everybody responds by being friendly with them. "A trustful affectionate disposition justifies itself, because it gives irresistible charm and creates the response which it expects. This is one of the most important results to be expected from the right education of character."

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CHAPTER XLIII

CHARACTER

Introduction

Moral character is the result of the formation of a number of habits. We have seen that is at first, *i.e.*, in infancy and early childhood, mainly *imitative*. Examples we wish to be followed by children are exhibited constantly by parents, school fellows and teachers. *Precept* is next added to *example*. This precept is based on incidents taken from biography and history. Besides, these examples and precepts, there must be the *doing* by the child. To educate morally, *i.e.*, to stimulate and develop the moral forces of the child there must be added to instruction the actual exercise of its moral powers.

Habit and character

Then with this exercise gradually develops *habit*, or the tendency to act under given conditions uniformly in the same way. These habits multiply and ultimately form a large factor in our *character*.

Development of character

But the full *development of character* demands a further stage of effort. Our conscience, sense of duty, and reason should come to play their part in our life. They should form an ultimate court of appeal, whenever there is conflict between duty, reason and conscience on one side, and habit and custom on the other side. And on those occasions character is manifest in the power to subordinate the force of habit or custom to the sense of reason and duty. And so, what we mean by character in school life and work is, that the pupil has been so trained to act that he can be depended upon uniformly to act according to what is right and reasonable.

Ordinary school routine and the development of character

The formation of moral character in school does not depend on merely a special set of lessons designed for that end. The whole course of study and the entire round of duties in a well-ordered school afford opportunities for the practice and development of those habits which form the basis of a good character. In the playground or in the class-room there will occur several happy moments when quite incidentally suitable and illustrative suggestions may be made regarding diligence, honour, truthfulness and love. These are more useful than abstract moral truths illustrated with distant facts. Most teachers endorse this opinion that the minds of the pupils are most open to the appreciation of moral truth when some event or experience arising in the ordinary course of the day's work affords the fitting moment for the seed of truth being sown. So teachers should take reasonable care, in the ordinary management of their schools and classes, to bring up the children in "habits of good manners and language, of cheerful obedience to duty, of consideration and respect for others, and of honour and truthfulness in word and act."

Influence of the teacher and the public opinion of the school upon character

The teacher's individuality and his character have much to do with the character of each pupil of his class. With young children the force of *imitation* is strong. It continues to be so in the entire school life. 'As the teacher so is the school.' This maxim suggests the power which the teacher possesses for impressing his own moral qualities on his pupils and for inspiring them with his own intellectual force. "The utmost impartiality ; the strictest integrity ; an open, frank and generous dealing with children ; being patient and per-

severing without being weak or irritable ; combining the docility and humility of the child with the firmness and rectitude of the righteous man—these are moral qualities which children will strive to copy, and when a fair proportion of the school community is found manifesting them a force of public opinion is developed which far outweighs the individual influence of the teacher.” The influence for good then becomes irresistible. The teachers are ‘*an army of light*’. And that that light be shed so as to guide the children of our land into paths of moral glory as well as along those of intellectual advance is the crowning endeavour of every loyal teacher.

Over-control and character

Over-control in intellectual training is not good. If the learner is always being directed in his studies, he does not sufficiently developed the power of independent intellectual effort. So the importance of encouraging self-help should be recognised.

The same rule holds good in moral training also. We should afford opportunities for the exercise of the pupil's power of self-control as to conduct. But these opportunities should be carefully adjusted to the pupil's strength of self-control. In the case of very young pupils there should be direct and systematic control. But in the case of the senior scholars conduct should gradually be freed from continuous control, and periods of effort completely independent of supervision should be permitted. The sentiment of obedience and submission should gradually be transferred by the pupils from the person of the teacher to a law or a rule which that person represents.

Too much of direct and continued personal control weakens the character of the pupil. It destroys his individuality and makes a pupil of him. It does facilitate the dawning of the

sense of responsibility. The true course of development in control is from a state of dependence on the part of the pupil towards a state of mutual confidence and esteem between both pupil and teacher.

Self-control and Character

The value of the above-mentioned higher discipline in the formation of character cannot be over-estimated. The teacher should not pride himself upon the effect which his presence secures. Rather he may feel glad for the effect which his personality produces in his absence, both during the course of the pupil's study at school and long after the pupil leaves the school and passes into the world.

The teacher should gradually transfer the seat of control from himself, as the sole centre, to each of his pupils. When self-control is thus spread from centre to centre, the entire controlling force of the school becomes much more effective for discipline. Much of the teacher's energy is spared. And school becomes a powerful means of developing intellectual force and moral strength.

“ If in a locality a master be placed who is really devoted to his work, who feels teaching and training to be his proper destiny, who succeeds in gaining the affections of his pupils, who softens them by kindness, moulds them by a friendly sympathy with their wants, instils the knowledge of *things* rather than *words* and awakens wholesome sentiments in the minds of the entire mass, such a school is assuredly accomplishing a great work in connection with the mental and moral improvement of the community.” Schools that stand the test implied in the above statement are amongst the best in their aggregate effect on the population around them.

To keep such an end strictly in view requires a good deal of self-denial and self-restraint on the part of the teacher.

Teachers should not care to see only what pupils *can do* but also what they *are becoming*. They should realise that more solid purposes of education are in reference to the future life of the children. "They should be deeply imbued with the sentiment that they are not merely preparing boys to pass examinations on certain subjects, but training a pliant mass of human thought, feeling, emotion, impulse, and moral purpose for the great and uncertain future."

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PSYCHOLOGY AND ART OF EDUCATION

PART V

SCHOOL ORGANIZATION AND CURRICULUM OF STUDIES

PSYCHOLOGY AND ART OF EDUCATION

PART V

SCHOOL ORGANIZATION AND CURRICULUM OF STUDIES

SCHOOL ORGANIZATION

CHAPTER XLIV

AIMS OF EDUCATION

“ If there be any profession of paramount importance, I believe it is that of the Schoolmaster.....When a man of enlarged heart and mind comes among boys—when he allows his being to stream through them, and observes the operation of his own character evidenced in the elevation of theirs—it would be idle to talk of the position of such a man as honourable. It is a blessed position. The man is a blessing to himself and all around him.”—

Tyndall

Introduction

Schools should be organized for boys and girls, and not for examinations. The one and the only aim that the teacher should have in mind is the welfare of the pupil—mental, moral and physical. Let us ponder over the words which Wren said in his introduction to his book on *Indian School Organization*. “Organize the school to benefit the scholar,—to train his faculties; to widen his outlook; to cultivate his mind; to form and strengthen his character; to develop and cultivate

his aesthetic faculty ; to build up his body, and give him health and strength; to teach him his duty to himself, the community, and the state ;—in short, to make an honest, capable, and healthy man of him ;—organize the school for *this*, and not to prepare him for the Matriculation.”—(Indian School Organization : Introduction.—Wren).

“ Organization ”

The etymological meaning of the term ‘ Organization ’ is tool or instrument with which work is performed. In biology the ‘ *Origin* ’ is a part performing a given physiological function. The sum-total of the organs of an individual is called an *organism*. “ Finally, an artificial organism, in which a variety of members and instruments are disposed in order to secure a desired end, is termed ‘ *an organization* ’. In this case organization covers both the *arranging* and the *arrangement*. Pedagogically the application of this word is very wide. It means the *co-ordination* of the school of a town or district or country. It means the *division* of a school into various departments. Or it means *plans* laid down by the chief for the effective teaching and proper governance of his scholars. All these three come legitimately within the meaning of ‘ School Organization ’. We are, however, concerned now with the last-named phase of *organization*, that is, with the *formation* upon which instruction and discipline rest.

Aims of Education

Since the *School Curriculum* depends on the *Aims* of education, we have to examine what the various aims are.

(1) *The Vocational-aim* :—This is often called *bread and butter aim*. More than eighty per cent of parents send their children to schools to enable them to equip themselves for the purposes of earning their living. This may be purely utilitarian, but when we remember that to advance individuals is also to

advance the social group indirectly, it does not appear as sordid and selfish as it appears to be. Nevertheless, there are some objections to this 'aim'. (a) Mere vocational education does not meet the needs of life. One should realize his place in the social system and be conscious of his obligations to his fellow beings. (b) Besides, man has a *soul* to feed. These considerations necessitate a liberal education.

Hence subjects which are not directly vocational in aim have also to be included. A purely vocational training will narrow one's own outlook upon life. Moreover, the changing industrial environment requires not a specialised ability but general capacities to adapt oneself to changing conditions. One who is trained in the single vocational aim becomes conservative and unprogressive. Therefore, a purely vocational aim is out of question.

(2) *The Knowledge-aim*.—This is exactly the opposite of the Vocational-aim. The latter is too practical while the former is impractical. The vocational-aim glorifies material possessions and represents a life of struggle while the Knowledge-aim glorifies culture and represents a life of leisure. All knowledge must serve some useful purpose. Therefore mere theoretical knowledge will not be of any help in the present-day world.

(3) *The Culture-aim*.—A certain standard of knowledge is believed to be appropriate in the case of people occupying a particular station in society. The Culture-aim desires rather to produce a man of a certain type of mind and breeding than to change him with knowledge. But there is a larger definition of culture which says that there should be acquaintance with the best that has been thought and said in the world. Such culture adds beauty and refinement to life, and therefore such an aim is desirable in education.

(4) *The Complete Living-aim*.—This aim requires that one should know how to order the right ruling of conduct in all

possible situations of life. One should know how to treat the body, how to treat the mind, how to manage one's affairs, and how to behave as a citizen and enjoy life. This is complex living indeed and it includes most of the aims formulated for education. But there is no standard by which we can compare and know as to when life may be complete. This aim therefore cannot be seriously entertained.

(5) *The Moral-aim*.—Man is not born moral. The immoral tendencies in him are kept down by the will which is responsive to higher ideas. No one could deny that morality should be one of the aims of education. But as the sole aim it will be narrow. If we are to spend all our time at school in inculcating truth, honesty etc., how can Science, Mathematics and other studies be brought into the curriculum.

(6) *The Social-aim*.—This aim has a greater number of advocates than the Moral-aim. The purpose of this aim is to make man fit for society; but the social aspect is not the only aspect of the life of the individual. Man comes into contact with animate and inanimate nature for the proper understanding of which a knowledge of Science is necessary.

(7) *The Harmonious-Development-aim*.—This aim lays down that, in order that the mind may be fully developed, subjects dealing with each aspect of mind must find a place in the curriculum. But this is not clear. In the first place, the word, "harmonious," suggests a standard. But what standard it is, is not known. Secondly, if the aim were to be literally pursued the pupils will be jacks of all trades and masters of none. At a certain stage in its life the child takes special interest in one particular branch of study to the exclusion of other subjects of the curriculum. Education, therefore, must make provision for specialization of a certain standard to be reached.

(8) *The Biological-aim of Adjustment to Environment*.—In human beings instincts are not so strong as they are among the

lower animals. Therefore, the man has to be educated and trained for the purpose of adjustment to environment. This adjustment is more intellectual. Further, the period of infancy among human beings is so long that special training is absolutely necessary. This Biological-view is now supported by many who say that, if our education should make us more efficient in life, it should help us to adapt ourselves to the environment. Adjustment is the key-note of life. One adapts nature to one's needs. One makes warm places cool and cold places warm enough. Thus Adjustment to the environment should be the main aim of Education.

The School and the State

The School is State-aided and guided by State regulations. It is a unit in State organization. So it must be in touch with public sentiment and be limited by the public purse. "Hence a multitude of forces converge upon the school and streams of influence surround it." In spite of consequent invisible chains and restrictions upon him the Teacher need not lose faith. "There is still an immense field for the play of personality and the operation of initiative, both within and beyond the school premises."

For preserving its health and vitality it is necessary for a School "to be sometimes throwing off or modifying old practices and adding new ones." Change is the law of nature. For any institution to thrive it is absolutely necessary that new ideas are occasionally given play in its constitution. Change, however, must not be introduced without mature consideration.

Teachers

The Head Teacher should extend a tactful consideration to each member of the class. He should remember that all are not influenced and directed by the same means. He

should bear in mind that it is only through the Class Teacher that each individual pupil can be reached, and the law of the School upheld.

The interest of the Assistant Teacher should not be limited to his class only. His horizon should be as wide and extensive as the School. He should take a living interest in everything that concerns the School as a whole. He should give loyal co-operation to the Head Teacher. And he should be sincerely devoted to the interests of his pupils.

Experience and Education

In all things *experience* is the chief guide, and it is not possible to lay out rules for guidance in all situations and circumstances. However, a good school possesses the same essential features wherever found. It always nourishes the same interests. It always leads to thinking as well as observation. It always points to the Beautiful in the world and to the Sublime above it. Always a good school awakens sympathetic participation in domestic and civil weal and woe.

It is clear that *a sound organized basis* is essential. Personal enthusiasm, an insight into child nature, a knowledge of the procedure adopted by the best educationists and of the principles underlying this procedure will probably be the Teacher's most suitable outfit.

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CHAPTER XLV

THE IDEOLOGY OF THE NEW BASIC SCHOOLS: SOME GENERAL PRINCIPLES OF NEW EDUCATION A Special Feature of Basic Education :

Relating Studies with Needs of Practical Life

Within recent years we have had many suggestions put forward for the better organization and synthesis of the subjects of study. All the specialists have agreed with regard to the necessity of synthesising the knowledge which the pupils gather up in the separate school subjects. Very often at the present time the children at school get only a patch-work of variegated information. They get a little history, a little grammar, a few rules of arithmetic, and miscellaneous facts about science. But rarely do they get the idea of an intimate relationship between the various subjects, and frequently no more than a glimmering of their separate *utility for practical life*. It is this fact of *relating* the subjects taught with the *needs and utility for practical life* that constitutes the special importance of the Basic Education movement started at Sevagram, Wardha.

Education should aim at making a child *adjust* himself to the environment, which is mainly the human society. As such, the child, if it is to grow in such a society, must know about it. The curriculum must, therefore, be shaped to reflect in a comprehensive manner the active life of the whole community so that its appeal to the child will be a stimulus of the sharpest kind. “Educational vitality depends upon the closest intimacy being preserved between the interests of the child and those of his family and neighbourhood, of the city and the surrounding region, of the nation, and finally, of humanity at large.” (Education for Self-Realization and Social Ser-

vice: Frank Watts). School life should not be divorced from the current *individual* and *social needs*.

And also, the child must know how society has evolved from low stages of primitive savagery. Society has progressed in the light of the past experiences of its members. These experiences of the human race constitute the several forms of knowledge like language, science, mathematics, etc.

The need of the modern nations like India is that every man and woman shall be able not only to live for himself or herself but also to play a useful part in the common task of developing and enriching its co-operative resources, material and mental. But *it is not right to give children a mere utilitarian vocational training of a narrow kind*. In the first place, everyone should receive *a general education*. Everyone must be given primarily, in the interests of the community, the education which fits him *to perform the duties and enjoy the privileges* of citizen and human being, as well as to *pursue with understanding his own specific calling* and raise “the dignity of human labour.”*

The Permanent Needs of Individuals

The permanent needs of individuals, whether for themselves as individuals, or as members of the family, city, region, nation, or humanity, may be summed up very shortly. To *perform the functions of an enlightened citizen adequately*, an individual should possess in addition to bodily vigour, a certain minimum of—

(1) *Knowledge* about the environment, physical, material, and living, in which the individual lives ;

(2) *Skill in judgement*, in calculation, in the use of language, both spoken and written, and in some physical art, craft, or other occupation ;

* Basic Education (Article in New Education—Published under the authority of D. P. I.)—Hon’ble Mr. T. S. Avinashilingam Chettiar.

(3) *Corporate feeling*, such as that, for example, as is expressed in the desire for the public good, in the attitude of reverence towards old age and solicitude for the young, in sympathy for the needy and unfortunate, in loyalty towards the community from which he must derive whatever culture he will eventually possess, and in some form of religion.

Three Possible Centres of the System of Studies

There are three possible 'pivots' or 'centres' about which the whole system of studies may turn: (1) The one is the attitude of the teacher who is most concerned with the social and human aspects of education. This implies instruction in the *Humanities*,—Literature, Art, History etc. (2) A second attitude is the attitude of the Teacher who derives his enthusiasm from contemplation of the natural world about him. This implies instruction in the *Natural Sciences*. The fundamental difference between the two attitudes is this. The *Humanities* are concerned with men and women in their relation to other human beings. The *Natural Sciences* are concerned with the world of "Nature" and man's relation to it. (3) There is also a third attitude, viz., the Practical Attitude. While the problem of education must be attacked from the above two main points at the same time, the child itself through its manifold activities is making head-way on its own account through *practical experimental activity*. That is to say, the three broad divisions of the curriculum must correspond to our classification of knowledge as relevant to (1) the Humanities, (2) the Natural Sciences, and (3) the Active Occupations.*

The Culture Epoch Theory : Its Deficiency

A general principle which could be of help in working out a detailed curriculum of studies was sought by Herbart in

* Educational Reconstruction—Collection of Gandhiji's Articles.

what is known as the *Culture Epoch Theory*. It is a widely accepted belief that *the individual in his progress repeats the history of his race*. From this it is inferred that the stages in the progress of the knowledge of the individual correspond to the stages in the progress of the whole human race. From this again it is inferred that the subjects of study suited for certain stage in the individual's progress should be sought amongst the materials of knowledge in the human race at the corresponding stage in human progress. And this theory has been worked out almost to wearisome details by Herbart's followers.

But this theory is by no means accurate enough for adoption in practice in as much as it *ignores the relation of an individual to his society*. An individual is not isolated. He is born amidst certain social surroundings so that his mental inheritance and the start he has in his mental career will depend upon the circumstances. For example, it will be quite possible for a child born in civilized society to leap over certain stages which another child less fortunately placed may have to be taken through. And after all a child is a child and a savage is an adult, and any amount of speculative thinking will not do away with this essential distinction. So, the Culture-Epoch Theory has come to be given up as a guiding principle with regard to the fixing up of a scheme of studies.

“Anubandha” or the Method of Correlation

The Method of Correlation may be adopted with advantage in the higher classes so that the pupil's interest in the several subjects may be strengthened. Only those subjects should be brought together whose boundaries touch each other, as for example, History with Geography, Literature, Composition and Drawing with almost all subjects. There should, however, be no artificial forging or ingenious correlation. The mental attitude to be adopted in using this method

is to enable the several subjects of the curriculum which are so many interpretations of experiences, to combine together to serve effectively the Practical Interests of the individual. So the correlation is to be sought not in the scheme of studies so much as in the mind of the Teacher. The Method of Correlation can be effective only when the teachers in the several subjects heartily co-operate in the General Interests of the school and the Practical Interests of the people in the special environment.

Correlation is an attempt to build up a Coherent Course of Study on the basis of the various subjects which compose a School Curriculum. It helps the pupils to realize that subjects after all represent an easy *classification* of knowledge. They are only various *forms* of the knowledge of the heritage of man consisting of the achievements and experiences of the human race.

For instance, the pupils should never be led to think that History is a subject by itself and that it has nothing to do with Geography. So, the Teacher should illustrate in his teaching the historic influence of Geography and may also relate both to a Craft or an Art which the group of pupils may choose. People are not static. They have life. They have activity. They strive for progress. They struggle for better living. Some countries are more industrious than others. This is due to the climatic conditions and natural features of the country. Again in a country where people have to work hard for living there is greater progress. Man's life in this world is one of evolution. So in teaching Geography a Teacher will have to introduce this idea of *adjustment* and Evolution.

Four Types of Correlation

There are four types of correlation :

(1) *Correlation within the content of a subject.*—This is the arrangement of each topic in such a manner as one

develops as a natural outcome of the preceding one. This arrangement may be logical or psychological. The psychological order is that which appeals to the child's interests and powers of comprehension. For example, in learning a language the logical order is to begin with alphabet, but the psychological order is to begin with words, as letters by themselves have no meaning.

(2) *The inter-relation of subjects in the Curriculum.*—Suppose the pupil is studying the Moghal period in Indian History. Suppose he sees also some of the models and pictures of the Moghal period. The relation between these should clearly be brought to the mind of the pupils.

(3) *Correlation of school and life.*—What is taught at school should be *related to life* around.

(4) The fourth kind of correlation is called *Concentration*. Allied subjects must be linked together or grouped together round a single 'Core' subject or 'Centre'. For instance, a *Craft* like Spinning or Weaving may be taken as the 'Core' subject leading on one side to History and Literature, and on the other side to Science and Mathematics. This method of correlation has the advantage of giving due prominence to one subject of primary practical importance.

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CHAPTER XLVI

THE CONSTRUCTION OF A CURRICULUM OF STUDIES

Principles to be observed in admitting Subjects to the Curriculum

(1) The Rule of *Restraint*.—The Curriculum should not be crowded. That is, it should not contain a very large number of subjects.

(2) The Rule of *Sufficiency*.—When once a subject is included in the Curriculum there should be no stinting with regard to the amount of time needed for it.

(3) The Rule of *Sequence*.—Each subject has to be developed in a systematic order. Thus Arithmetic in the lower classes should gradually develop into Algebra. Nature Study and Object Lessons in the lower classes should develop into well-defined Sciences like Botany, Physics, Chemistry, and Zoology.

(4) *Option*.—The Curriculum should be wide. All the pupils that attend the school will not have the same attitude and taste for the same subject. So, if a subject is not suited to a pupil's capacities and tastes, it will have a depressing effect upon him. It should, therefore, be possible for him to have some other subject more suited to him. So the Curriculum must be wide enough to hold a large choice of subjects for different types of scholars.

(5) *Flexibility*.—A standardised Curriculum for all schools irrespective of the nature of the environment of children is not desirable. It is true that some fundamental subjects like the Three R's are to be included in the Curriculum. Still the principle of the distribution of studies according to the *needs, interests, and pursuits* of village life and urban life

must be followed. A Uniform Curriculum, both for town and country children, is educationally unsound. Pupils of rural schools must be taught the fundamentals of Agriculture, Horticulture and Nature Study. Rural school instruction which fails to utilise a wealth of the special Vocations of the locality, and Crafts and Arts, its local knowledge, local history and local sentiment, will develop unreality in school life. The great point of Rural Education is that of the *adaptation* of the work of the rural schools to the needs of rural life without neglecting the larger life outside. In short the aim of Rural Education is to create a happy country life. It is the neglect of this aspect in the Prevailing System of Education in India that is sought now to be rectified by the Basic National Education Scheme of Wardha.

(6) *Adjustment* to the stages of mental development.—The Curriculum should adjust the pupil to progress. It should contain subjects suited to the different stages of the mental development of the children. With regard to everything that we do at school we should ask, “Is this suited to the child’s present stage of mental development?” We should lay stress on the necessity of giving the child proper mental food suitable for each stage in the course of the mental development of the child. To give a normal boy of eight years Euclid is like feeding a baby on meat and *dhal*. On the other hand, to give a boy of sixteen Fairy Tales is like feeding him on Horlick’s Malted Milk.

(7) *Continuity*.—Young children in the Basic School are purely governed by *sense-experience* to which they react. The basis of all knowledge is Concrete Experience. So the studies in these schools rightly admit of *concretised teaching*. Thus the common objects of the child’s environment must be used as materials for his observation. He must be allowed to carry and handle things for himself. There should be no abstract teaching at all. Everything must be taught

in the Play-Way. Hence the Curriculum should contain only those subjects that admit of such treatment.

As regards the Post-Basic School Curriculum it must, while being general, at the same time provide for certain tendencies towards subjects like Science, Mathematics and History. At this stage the boy exhibits specific interest towards certain subjects. From sixteen years onwards specialization may be insisted.

It should be noted that the Basic and Post-Basic School Curricula should be continuous so as to select boys of ability for subjects in the higher grades.

How to Proceed with Regard to Choosing the Subjects for the Curriculum

(1) The Law of Necessity

In the first place, the *Law of Necessity* settles the subject. The school is asked to *equip for the needs of life and for progress*. The former brings into the curriculum such subjects that help the individuals to earn their living like weaving, carpentry or agriculture, shorthand, book-keeping, banking, or type-writing, etc. Necessity varies with times and with the localities ; and therefore the subjects also shall have to change to suit the progress of the times as well as to the needs of the locality. For, if at one time Archery was considered as an important subject, it has to give place to Chemistry, Book-keeping or Banking now-a-days.

In this fixing of the subjects with reference to the claims of environment, childhood is merely looked upon as the ante-chamber to manhood. The child has no individuality of his own. The Past is to be inculcated for its own sake.

(2) The Psychology of Childhood

The *Psychology of Childhood* is one of the most determining factors for fixing up the *curriculum*. When the claims of

the childhood determine the subjects of the curriculum, children's *interests*, *purposes* and *capacities* decide the subjects chosen. In the IX Century many movements recognising the importance of the individuality of the child began. Rousseau, Froebel and Pestalozzi were the leaders of the movement. They argued that the child is a growing organism with an individuality of its own and discovered that *what was good for adult to study may not be equally good as the subject of study for the child*. Thus the subjects of the curriculum vary according to the *ages of children*. Kindergarten subjects have to play a great part in the Pre-Basic classes.

(3) The Law of Apperception

The Law of Apperception should also be taken into account in deciding the subjects of the curriculum. The advance of each mind to fresh fields of knowledge depends upon the knowledge that it already has and upon the nature of the new knowledge and its relation to the old. Therefore, *the earlier portions of the curriculum should prepare the new way for the later—and no new knowledge should be introduced in any stage of the curriculum which has not been adequately prepared for*.

(4) Spontaneous Activity

Spontaneous activity, as every one knows, is one of the important characteristics of childhood. The child takes delight in *acquisition* and also in *imitation* which later on leads to *origination*. The teacher's care, therefore, should be not only to include in the curriculum suitable material for thought but also for action. Hence in the curriculum we should admit the following occupations—Drawing, Music, Games, Manual Training, etc.

(5) Correlation

Correlation is another determining factor. The subjects of the curriculum are not disconnected with one another.

Geography must help History, while Mathematics and Science are mutually dependent. Each shall, therefore, have a place in the curriculum.

Now we shall try to see the changes that are to be affected *suiting place and sex*. In any *curriculum* for Pre-Basic School one thing is certain (*i.e.*) a minimum of general instruction comprising the three R's, Reading, Writing and Arithmetic. These three subjects must be common to all the Elementary Schools whether they be either boys' or girls' schools, or urban or rural schools. And then also the needs of the Environment and aptitudes of the Sex should be provided for by Optional Subjects.

(6) Rural Needs

Apart from the general minimum of knowledge comprising the R's we must also have in view what is called the '*Bread and butter-aim*', that is, the aim which helps for earning the livelihood. Provision shall also be made for the fulfilment of this aim. Nearly eighty per cent of children attending village schools stop their education after the tenth year and take to Agriculture. Therefore, the knowledge imparted to them, if it is to be of any use, should be practical knowledge about *agriculture, weaving, farming, etc.* Not only this, a *rural basis should be given to all the subjects taught*. This, in fact, is the chief merit of the new Basic Schools.

The Language Lesson should be about *agricultural subjects*, and Arithmetic should include *agricultural problems*.

As the children of the villages are ignorant of towns and town life, subjects dealing with towns and town life must be included in the curriculum for Rural Schools. In the same way, the Urban School boys, since they are ignorant of village life, must be taught something about villagers. In the urban areas, as children come into contact less and less with Agriculture and more with urban activities, subjects dealing with

civic life in towns, industries, administration, means of transport, shall occupy greater space and time than the rural subjects which also have their own place according to the *principle of compensation*.

(7) Women's needs and the Principle of Compensation

Similarly women's place in life is different from that of men and in any scheme of education therefore provision must be made to suit girls' different requirements. *Domestic Science* naturally shall occupy a great space and time in the curriculum for Girls' Schools. In the selection of topics for their prose lessons as well this difference will have to be noted. Thus, Readers prescribed in the case of Girls' Schools shall deal more and more with the *tender traits of womanhood* than the *heroic traits of men*. Their inclusion shall be to the extent allowable by the *principle of compensation* to enable each sex to appreciate the other.

(8) Provision for Progress

We have said that curriculum is the epitome of man's life and man's life is always towards progress, and so the *curriculum should provide room for progress*. It is very necessary to exclude knowledge that has become old, antiquated and out-of-date, and to include knowledge that is pertinent to the present life. It is not an easy task for Old Knowledge to find champions who have specialised in it; for now New Knowledge is favoured by modern men. As for the New Subjects, they lack the school facilities needed for teaching them and they have not enough teachers who will impart them. For these reasons it is true to say that *the School always lags behind the Civilisation of the time*.

From the above it is clear that a curriculum should fulfil the needs of more than one object. It must contain a good number of subjects achieving different results. The curriculum for schools imparting General Education may be

divided into *four classes—the liberal subjects, the technical and the scientific subjects, the art subjects, and the vocational subjects* relating to crafts involving manual labour.

(9) Compulsory and Optional Subjects

Since a certain minimum of knowledge of general nature has to be imparted at all costs, the *curriculum should contain some compulsory subjects*. The *three R's* are compulsory in Elementary schools. Then a study of certain subjects of an advanced type may be left to the choice of pupils and this gives the list of Optional Subjects. *In the selection of subjects and in determining the amount of matter, the following points are to be taken into consideration :—*

1. The situation and surroundings of the school.
2. The claims of the environment and of the child.
3. The facilities provided for instruction by the management.
4. The status of the school.
5. The stages of mental development and average mental level of the pupils attending the school.
6. The staff of the school and the efficiency of the internal management.
7. The progress of the school.

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CHAPTER XLVII

SUBJECTS OF SCHOOL CURRICULUM AND HINTS REGARDING THEIR CORRECT TEACHING

Bare Beginnings of Subjects for Early School Years

There are some subjects which everyone should know and some others which some only need know. For example, Medicine and Higher Mathematics, are necessary only for some pupils. On the other hand, for the bulk of mankind it is sufficient to have an elementary knowledge of Physiology and Hygiene and bare elements of Mathematics. In the main, the things taught at school before the age of fourteen should be among those that everyone ought to know. Apart from exceptional cases, *specialisation ought to come later*. It should, however, be one of the aims of education before fourteen to discover special aptitudes in boys and girls, so that, where they exist, they may be carefully developed in the later years. For this reason it is well that everybody should learn the bare beginnings of subjects which need not be further pursued by those who have no need for them.

Two *principles* determine the Curriculum in the early school years: (1) Deciding as to what everyone *ought* to know. (2) Deciding the *order* in which subjects are to be taught. In this we are naturally guided by the relative difficulty of subjects, teaching the easiest subjects first.

Spinning and Weaving

An Excellent Centre for Education

Spinning and Weaving constitute an excellent “centre” for education in both the Basic and the Post-Basic Schools. The higher grades may be taught the Social, Moral and Economic aspects of Spinning and Weaving, besides the practical training given to the pupils. Incidentally the History of

the Textile Industry in India and in the world may be made to be understood by the pupils of the Higher Grades.

As alternatives, Cardboard Work, Wood Work or Metal Work may be used as Craft-centres.*

Personal Hygiene, Social Studies and Civic Training

Additional Centres

In the Revised Syllabus published by Sjt. E. W. Aryanayakam on behalf of the Hindustani Talimi Sangh, Sevagram, Wardha, we find that to the hitherto suggested Craft-Centre are added *two new centres* of educational programme *viz.*, Cleanliness and Health. They have been added to the original syllabus of Basic Education first published in March 1938 as a tentative basis to start experiments. And it is evidently on the basis of "a background of fairly extensive experimental work" that these two new centres have now been added.

But as Srimati Asha Devi of the Syllabus Revision Committee explains, this addition is not really a new departure, "as most of the activities and correlated knowledge detailed under these two headings existed in the first syllabus under the headings of General Science and Social Studies." She tells us further that the actual experience of work with village children and teachers have demonstrated the vital importance of these problems in rural life, and that therefore "the Committee considered it a sounder educational procedure to recognise them as independent centres of education and give them the first place in the revised syllabus". Similarly, "the present syllabus has given greater emphasis to social training as a result of actual experience of work."†

*Spinning: A Craft or an Art? (Article in 'New Education')—T. P. Santhanakrishna Naidu.

† Basic National Education (Revised Syllabus for Grades I to V) Introduction—Srimati Asha Devi.

By the time a child is *five* years old he should know how to *read* and *write*. This should be the business of the Montessori school or the Pre-Basic School, as the case may be. By this time the child should learn a certain accuracy in *sense-perception*, the rudiments of *drawing* and *singing* and *dancing*, and the *power to concentrate* upon some educational occupation amidst a number of other children. Anything involving severe mental effort should not be undertaken before the age of *seven*. By sufficient skill on the part of the Teacher difficulties can be enormously diminished.

Arithmetic

Arithmetic should not be a bugbear

Arithmetic is the bugbear of childhood. Bertrand Russel tells us that he used to weep bitterly because he could not learn the multiplication table. But, if it is tackled gradually and carefully, as it may be done by means of the Montessori apparatus, there is no need for such a sense of blank despair. In a later stage, however, some tiresome mastering of rules seems to be unavoidable for securing sufficient proficiency. The answer to a sum is either right or wrong. But it is never "interesting" or "suggestive". Nevertheless Arithmetic is an important element in early education, as it affords a natural introduction to accuracy. But its difficulties should be carefully graded and spread out thin. Too much time at a stretch should never be devoted to such difficult subjects.

Geography

A Fascinating Subject

Both *Geography* and History might be made fascinating to quite young children. Love of Geography may be acquired through the love of *trains* and *steamers* as well as through *spinning* as has been suggested and experimented by the

Basic School experts. Children want to know of journeys that their imaginary trains and steamers are to make, and they listen with the closest attention while they are told of the stages of the journey to London or to Japan. Pictures of the various countries on the way may be shown to them. On the map the journey may be pointed out. The journey to Madras or to Rameswaram or to Benares, to Wardha or to Nagpur or to Delhi, will interest them passionately. They will note the important stations where the train stops. They may be fascinated by the North Pole and the South Pole, and wonder why there is no East Pole or West Pole. They may be made to see the directions of Greece, France and America over the sea, and a good deal about what is to be seen in those countries. None of these things will come by way of dry instruction, but all in response to an eager curiosity. Almost every child becomes interested in Geography as soon as it is associated with the idea of travel.

Geography ought to be taught partly by pictures and tales about travellers, but mainly by the cinema and the magic lantern showing what the traveller sees on his journey. The knowledge of geographical facts is useful. But it has no intrinsic intellectual value. When, however, it is made vivid by pictures, it has the merit of giving food to imagination. It is good to know that there are hot countries, cold countries, flat countries and mountainous countries, black men, yellow men, brown men, and red men as well as white men. This kind of knowledge diminishes the tyranny of familiar surroundings over the imagination. And it makes it possible in later life to *feel* that distant countries really exist. For these reasons Geography should be given a large place in the teaching of very young children. And there is no doubt that if properly handled children enjoy the subject. Why children in most of the schools feel bored by the subject is that teachers most stupidly have to worry themselves and

the children with notes containing the nasty rigmarole of the mere names of mountains, oceans, lakes and rivers for the purpose of memorizing them mechanically for scoring marks in the most silly kind of examinations.

But what should really be done is that pupils should be given books with pictures, maps, and elementary information about different parts of the world, and get them to put together little essays about the peculiarities of various countries.

History

A Correct and Useful Teaching

What applies to Geography applies even more strongly to *History*. But History may be begun at a slightly more advanced age, because the sense of time is rudimentary at first. Russel is of opinion that History can profitably be begun when the child is about five years old. At first there should be interesting *stories* of eminent men, *abundantly illustrated*. At that age, children should have access to a *picture history* of India. Babar going round and round the sick-bed of Humayun, praying to God that his life might be taken instead of the life of his son, and Shajahan building the glorious Taj Mahal in token of his sorrow and love for his Queen Mumtaz, make a deep impression on the young minds. Hardly any boy or girl of five years would fail to be interested by the life of Shivaji.

By the time the child is six years old he ought to be ripe for an outline of the World-History with the necessary simplifications, and with pictures or the cinema or magic lantern shows if possible. It is necessary to be careful, in teaching History, not to obtrude aspects which may be interesting to us but which the child may not be ripe to grasp. The two aspects which are at first interesting are : (1) the general procession of humanity from savage man to civilized man ; and (2) the dramatic story-telling interest of incidents which have a sympathetic hero. We should

keep in our own mind, as a guiding thread, the conception of gradual but hindered progress, perpetually hampered by man's inherited brute nature, and yet gradually leading him on towards mastery of himself and his environment through knowledge.* The conception is that of *the human race as a whole, fighting against disorder outside and darkness within*, the little lamp of *reason growing gradually* into a great light by which the night is dispelled. The divisions between races, nations, creeds, castes and communities should be treated as *follies*, distracting us in the battle against ignorance and disorder, which is our one truly human activity.

At first only the *illustrations* of this theme should be given, and afterwards, if need be, the theme itself. Children should be shown the savage man struggling without home, and eating the raw fruits and roots of the earth. They should be shown the discovery of fire and its effects, the beginnings of agriculture in the river-valleys, the domestication of sheep and cows and dogs. They should be shown the building of villages, towns and cities, the conquests and the Empires. The whole of this could be made interesting in detail even to very young children.† But it seems to be useless to trouble children with dates and wars, persecutions and cruelties. Military conquerors should not be held up to admiration. The true conquerors, in the correct teaching of history, should be those who did something to dispel the ignorance or unhappiness—Buddha and Socrates, Galileo and Newton, and all the men and women who have helped to give us mastery over ourselves or over Nature. And thus should be built up the conception of a *lordly splendid destiny for the*

*Books like Sjt. Pundit Jawaharlal Nehru's "Discovery of India" and "Glimpses of World History", and Mr. Humayun Kabir's "Our Heritage" are good examples which illustrate this attitude.

In this connection one should read also "To Educate the Human Potential" by Dr. Maria Montessori.

† Read "Letters from a Father to his Daughter"—Sjt. Pundit Jawaharlal Nehru.

human race, to which we are false when we revert to wars and other follies, and to which we are true only when we put into the world something that adds to our human power and happiness.

An important point to be noted in this *correct and useful teaching of History* is that while dealing with the leading threads in the broad Human Movements, Biographies of great Personalities ought not to be neglected, for all children like narration and description, and get inspiration through lives of Great Men.* Great men like Mahatma Gandhi, are, as Thomas Carlyle describes, “the fire-pillars in this dark pilgrimage of mankind”, who “stand as heavenly signs, ever-living witnesses of what has been, prophetic tokens of what may still be, the revealed, embodied possibilities of human nature.”

Singing and Dancing

Nursery Rhymes, Folk Dances and Folk Dramas

In the early years at school there should be a time set apart for Dancing. This is good for the body and is a training for the aesthetic sense, besides being a great pleasure to children.† Collective dances should be learnt after the elements have been learnt. This is a form of co-operation which young children easily appreciate. In spite of these advantages of Dancing, I am afraid that Indian teachers in general will yet take a long time before they will be able to introduce this in their boys' schools.

Singing does not afford the same muscular delight, and its rudiments are more difficult than those of Dancing. So,

* Bapu—My Mother—Srimati Manu Gandhi.

G. K. Gokhale—G. A. Natesan.

† Theosophical Education—Dr. G. S. Arundale.

The Message of Beauty to Civilization—Srimati Rukmini Devi.

Art and Education (Article in ‘New Education’)—Srimati Rukmini Devi.

The Nature and Function of Art—Dr. T. V. S. Rao.

Singing should begin a little later than Dancing. Most children will enjoy singing. In very early stages songs such as those that are found in *Sri Kavikondala Venkata Row's works may be taught. After nursery rhymes really beautiful songs should soon be taught. The musical capacities of children differ. And so, difficult singing classes should be reserved for a selection among the older children. And then singing ought to be voluntary, not enforced.

Literature and Acting

Learning of Parts for Acting

With regard to the teaching of Literature, what is valuable is familiarity with certain examples of good Literature—such familiarity as will influence the *style*, not only of *writing*, but of *thought*. For a good effect of literature learning by heart is to some extent necessary. This will have a good effect upon beauty of language in speech and writing. But this has been so often overdone that much damage has been done to the minds and hearts of young ones. Mere learning of set pieces seems tedious and artificial to most children, and therefore fails in its purpose. It is better, therefore, that *learning by heart* should be associated with *acting*, because then it is a necessary means to something which every child loves. From the age of even three onwards children delight in acting a part. They do it spontaneously. But they are overjoyed when more elaborate ways of doing it are put in their way. The play will be in their thoughts for a long time, and all by way of enjoyment. After all, good Literature is intended to give pleasure, and if children cannot derive pleasure from it they are hardly likely to derive benefit either. For these reasons, in early years, the teaching of Literature should, I think, be confined to the learning of parts for acting.

* Sri Kavikondala Venkata Row is an Andhra Renaissance Poet who has written many popular songs and playlets for children in Telugu.

Well-written Stories

The rest should consist of *voluntary reading of well-written stories* placed in the hands of children, or obtainable in the School Library. People now-a-days write silly, sentimental stuff in the vernacular for children which insults them. Sometimes long and boring mythological stories in classical style are given in text-books. The artificiality of some books written for children is disgusting. Books like Kavikondala Venkata Row's "*Potti Katha*" should more and more be used in schools for children. There should be no display of patronising pleasure in child ways. Perhaps the best books for children are those that happen to suit them, though written for grown-up people. The only exceptions are books like some of those of Sri Venkata Row which, though written for children, are delightful also to grown-up people.

Hindustani and English

Teaching Without Mental Fatigue

In childhood it is possible to learn to speak a modern language perfectly, which can never be achieved in later years. There are, therefore, strong grounds for teaching languages like Hindustani and English at an early age. Some people are afraid that learning one's own language suffers if other languages are learnt too soon. But this is not true. A child's dramatic instinct prevents it from confusing one language with another. If a modern European language like English or an Indian language like Hindustani is to be taught it should perfectly be taught by a person whose native language it is. But we can very rarely afford this in India. So it should be taught by experts, who are at least the trained graduates of the Indian Universities. The point is that *children ought not to feel any artificiality* in talking a new language. The English or Hindustani teacher should be able to play games with children and talk to them in the language and make the

success of the games depend upon their understanding and answering. In this way the language could be acquired *without any mental fatigue*, and with all the pleasure of play-acting. And it can then be also far more perfectly acquired and with less waste of valuable educational time than in any other subsequent period.*

Mathematics and General Science

Geometry and Algebra

The teaching of Mathematics and General Science can only be begun towards the end of the years that we are considering under this section—say at the age of eleven.

Arithmetic must have already been taught. But now formal teaching in Geometry and Algebra may be begun. Some boys and girls like these subjects. But the great majority do not. And this may be due to faulty method of teaching. It is true, however, that sense for mathematics, like musical capacity, is a rare gift, even in a moderate degree. All the same, every boy and girl should know something of mathematics. Almost everybody may be made to understand the elements of Geometry. Algebra, is unintelligible to some. And yet an easy and feasible †*Composite Course* of Arithmetic, Geometry and Algebra can be forged for the Higher Grades.

A taste for Physics and Chemistry exists only in a minority of young people. Both Mathematics and Science, in the years from 12 to 14, ought only to be pursued to the point at which it becomes clear whether a boy or girl has any aptitude for them. In most cases a decision could be made at 14 years of

*The Teaching and Testing of Foreign Languages (Article in 'New Education')—Marjorie Sykes.

†The invention of such a Composite Course is one of the salutary recommendations made at the South Indian Teachers' Union Meeting held on 21st May 1949 with Sri D. S. Reddi, D.P.I., Madras Presidency, in the chair.

age. Some definitely like the subjects. Others would dislike them. At 14 however education should begin to be more or less specialised, according to the *tastes and aptitudes* of the pupil.

Farming and Gardening

Knowledge of Outdoor Things

All through the school years, education in outdoor things should continue. Outdoor things do not mean merely games. They have their importance and it is sufficiently recognised. But there is something else. Education in outdoor things implies also knowledge of agricultural processes, familiarity with animals and plants, gardening, habits of observation in the country, and so on. Town-bred people very often do not know even the simple things as those for example regarding a cow or a sheep. They seldom know the points of the compass, never know which way the Sun goes round. They cannot find out which side of the house is out of the wind. This is the result of artificial life lived exclusively in towns. This is the reason why town-bred people are utterly ignorant of everything rural and fundamental. The seasons and the weather, sowing and harvest, crops and flocks and herds, have a certain human importance. And these ought to be intimate and familiar to everybody. There is an innate need in children to be satisfied in seeing country life. So long as this is not satisfied, our educational system will remain incomplete.

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SYLLABUSES

Principles to be Observed in Framing Syllabuses

What the Curriculum is to the school, that the Syllabus is to the class. After choosing the subjects of the Curriculum, each subject has to be arranged in a certain number of topics for development and teaching. This division of a subject into topics is called a Syllabus. Before the teacher begins to teach a subject he should have before him a definite plan of treatment and sequence of topics.

In framing Syllabuses the following principles should be kept in mind :—

The different subjects chosen should be written down from the Curriculum year after year affecting the necessary changes as a result of experience gained in teaching the same. The following principles govern the drawing up of Syllabuses:—

(1) The time and conditions must be noted. The instruction to be imparted depends upon the time at the disposal of the teacher. From July to the end of April is the period to be taken into account and during this period due allowances must be made for the intervening holidays and vacation.

(2) The arrangement of topics in a syllabus should be *simple* and *suitable* but not ambitious. When a syllabus is simple, all that has been programmed for, can be easily provided, leaving some time for revision.

(3) There should be *unity* and *continuity* of topics arranged in a syllabus. The topics shall not be arranged in a haphazard manner. Each topic shall naturally lead to the next, and for its right understanding shall, to some extent, depend upon the previous one.

(4) The syllabus should aim at improving the thoughtfulness of the pupil by giving scope to a number of *problems*, *revision* exercises and *test papers*. There must be some scope for the pupil to work out his own problems.

(5) The *order* of the topics in a syllabus shall be according to the method proposed to be followed by the teacher. Each section of the subject should receive adequate treatment in regard to the amount that is done and the time spent, proportionate to the importance and difficulty.

(6) The topics of a syllabus shall ~~suit~~ suit the mental equipment of the pupils. They should be ~~such as~~ such as can be well taught to the class considering the ~~previous~~ training and the average capacity of the class.

(7) The syllabus should be *self-contained*. No important and essential subjects or topics should be avoided.

The Advantages of a Good Syllabus

(1) A Good syllabus serves as a guide in the pursuit of the daily routine.

(2) In the distribution of time it serves a useful purpose for the teacher in his classroom teaching, for it will enable him to adjust the material to be taught in the light of the requirements of the pupils.

(3) Teaching improves by experience; and to note the changes that take place from year to year, there should be a basis and this basis is the syllabus. Thus it stands as the foundation upon which the teacher builds his super-structure for the whole year. Teaching without a syllabus is like building a house without a plan.

(4) The syllabus helps in the determination of text-books, apparatus and appliances that are necessary.

(5) The difficulties caused by changes in the middle of the year are minimised if there is a well-checked-out syllabus and if teaching is done in strict accordance with it.

CHAPTER XLIX

SUBJECTS IN THE SCHEME OF BASIC NATIONAL EDUCATION

The following eight items of the Basic National Education Curriculum have been suggested by Dr. Zakir Hussain Committee in 1938. In 1946 five more subjects have been added by the Syllabus Revision Committee.

I The Basic Craft*

Psychological, Social and Educational Value of Craft-Centred Education

It is practically unanimously agreed by the modern educational experts that it is a highly commendable idea—the idea of educating children through some suitable form of productive work. It is appreciated on all hands as involving a most effective approach to the problem of providing an *integral all-sided* education. The method suggested and experimented with so much success at Sevagram by Principals Aryanayakam and Asha Devi, is *psychologically* desirable, because it relieves the child from the long tyranny of a purely academic and theoretical instruction. This achieves the *balance between the intellectual and the practical elements of experience* and enables the pupils to use dexterity of hand and intelligence for constructive work. *Socially*, when such a work is shared in by all the children of the nation, it tends to break down finally the barriers of prejudice between the manual labourers and intellectual workers. *Economically*, the scheme improves the productive capacity of the workers. And lastly, from the strictly *educational* point of view, knowledge will get related to life and gains concreteness and reality. These are the advantages modestly made by the Report of

* Reference : Article in New Education [Vol. I (1)] by Sri T. P. Santhanakrishna Naidu on Spinning : A Craft or an Art.

the Zakir Hussain Committee, and there is every justification for these claims made on behalf of the Craft-Centred New Education for Life.

II Mother-tongue

According to the Basic Education Scheme, the "proper teaching of the Mother-tongue is the foundation of all education." Precision of thought and clarity of ideas are not possible without effective speech and correct and lucid expression in writing. And again it is through the Mother-tongue that the child can be introduced to the rich heritage of the ideas and aspirations of his peoples, and that the right moral and social values are instilled into him. Moreover, through a capacity to read fluently and intelligently, the study of the literature of the country becomes a source of joy and creative appreciation.

III Mathematics

In the teaching of Mathematics the objective is to develop the capacity to solve speedily the ordinary numerical and geometrical problems connected with the child's craft and his home and community life. The aim is also to enable him to gain a knowledge of business practice and book-keeping. The teaching should be closely co-ordinated with life-situations arising out of the Basic Craft and the life of the school and the common life of the people.

IV Social Studies

Social Studies include outlines of Indian History stressing on the social and cultural life of the people, on the gradual movement towards greater political and cultural unity, and on "the ideals of love, truth and justice, of the co-operative endeavour, national solidarity, and the equality and brotherhood of man", of Truth and Non-Violence.* "Care should

* Truth and Non-Violence are of particular importance in the education of the Young Ones in the light of the Ideals of education advocated by Mahatma Gandhi.

be taken to prevent pride in the past from degenerating into an arrogant and exclusive nationalism.”* Along with the stories of the great liberators of mankind and their victories of peace the pupils should be given also a knowledge of the history of the Indian National awakening and of India’s struggle for social, political and economic freedom.

Pupils should also know about the Public Utility Services, the working of the Panchayat and the Co-operative Society, the constitution of the District Board and Municipality, and about the Vote and the significance of Representative institutions. As far as possible these studies should be made *realistic*.

The Social Studies also include a course in the Outlines of World Geography with particular reference to India and her relations to the other countries. The course should include plant, animal and human life in relation to geographical environment, weather phenomena, communications and occupations of peoples.

The Objectives of Social Studies

The objectives of these Social Studies are (1) to develop a broad human interest in the progress of mankind in general and of the people of India in particular ;

(2) to develop in the pupil “a proper understanding of his social and geographical environment” so that an urge to improve it may be awakened ;

(3) to inculcate a love for mankind ;

(4) to develop a sense of the rights and responsibilities of citizenship ;

(5) to develop individual and social virtues ; and lastly,

(6) to develop mutual respect for the world religions.†

* This caution is worthy of special notice on account of World Wars fought in the name of nationalism of a narrow type.

† It may be interesting for the teachers to notice the Aims and Objects of the World Religions Organization recently launched for Harmony and understanding.

V General Science

The objectives of this subject are:—

- (1) to give pupils an intelligent appreciation of Nature ;
- (2) to form habits of accurate observation and of testing experience by experiment ;
- (3) to enable pupils to examine natural phenomena and understand the scientific principles and apply them to the service of man ; and lastly,
- (4) to introduce pupils to the lives and endeavours of the scientists who contributed to the furtherance of knowledge and to the human well-being.

The Curriculum should include topics from various sciences like (a) Nature Study, (b) Botany, (c) Zoology, (d) Physiology, (e) Hygiene, (f) Physical Culture, (g) Chemistry and Cleanliness and Health, (h) A knowledge of the Stars.

VI Art: Drawing and Painting*

The work in Drawing during the first four years should be correlated chiefly with work in reading and pictorial representations in Nature Study and the Crafts. During the last three years emphasis may be laid on Design and Decoration and Mechanical Drawing.

The objectives of this training in Drawing and Painting are:— (1) to train the eye in the observation and discrimination of Forms and Colours; (2) to cultivate an appreciation of the beautiful in Nature and in Art; (3) to draw out the capacity for tasteful Design and Decoration ; and (4) to develop the capacity to make Working-Drawing of objects to be constructed.

Free *self-expression* is the main object of Art-teaching at the earliest stages. Slate and pencil, pen and colours, may

* *Vide* article in New Education [Vol. I (1)] by Srimati Rukmini Devi on Art and Education.

be used as materials. Children should be trained in a natural way to draw freely from their imagination or experience, things relating to school life or life in the home. They may also gradually learn to illustrate stories and to blend colours and decorate their school and home with flowers, leaves and designs. In the final grades the pupils may learn to prepare landscape sketches and produce original coloured Pictures and Paintings, which may be exhibited at School Exhibitions.

VII Folk Music and Dance

The objective of this item of the Basic School Course is to teach the pupils a number of beautiful Songs and Dance items and to cultivate in them a love for rhythm of sound and movement. Care should be taken to select only the best and elevating items. Special emphasis should be placed on Group or Chorus Singing.

Music is one of the most effective factors in the development of child's personality. The little children need not be troubled with highly technical classical music ; but the teacher may draw freely from the store-house of Folk-Music and create an atmosphere for the children to express themselves freely in rhythmic movements with the accompaniment of music. Folk dances will provide the teacher with the necessary material. But undue imposition of perfection of form by the teacher on the young ones is not advisable.*

At a later stage children may be taught Religious Songs, Festival Songs, Marching Songs, National Songs etc., in addition to simple Folk Songs. The Revision Committee recommends for North Indian Schools Book I by Bhatkhande for suitable syllabus.

VIII Hindustani

Hindustani is to be a compulsory subject in the School Curriculum. This will ensure that all the children educated

* This view is in consonance with that expressed by Acharya Vinoba Bhave at the All-India Basic Education Conference recently held at Perianayakanpalayam, S. India.

in the National Schools will have a reasonable acquaintance with a common "*lingua franca*". This is necessary if as adults they should be able to co-operate with their fellow-countrymen belonging to any part of the country. There is another reason also for making Hindustani a compulsory subject. This language is the most important product of the cultural contact of the Hindus and the Muslims in India. It is the repository of their best thoughts and aspirations. It is vital in expression and rich in content.

ADDITIONAL SUBJECTS IN THE REVISED SYLLABUS

In the Revised Syllabus for Grades I to V the following additional subjects have been added to the list of the above mentioned subjects, by the Syllabus Revision Committee appointed by the Hindustani Talimi Sangh in February 1946.

IX Cleanliness and Health

Personal and Community Cleanliness and Hygiene

The objective of teaching these subjects which spreads right through the seven years of the Basic Course will be the establishment of right habits and attitudes rather than the giving of information. In fact Cleanliness and Health are recommended to constitute two *new Centres* of educational programme. These have been added to occupy the first place in the syllabuses for Basic Schools. These items were included in the first syllabus under the headings of General Science and Social Studies. But they have now been rearranged and organized into independent Centres of education.

X Social Training

The Revised Basic School Syllabus has given a greater emphasis also to Social Training. The aim is to make the children take interest and due share in the social life of the school and the village. There are ample opportunities for

them to take responsibilities in the collective life of the school, in programmes connected with school cleanliness, school meals, school entertainments and festivals. Pupils of the V grade may begin to share in the programmes of village welfare* like village sanitation, adult education and cloth self-sufficiency.

XI Gardening and Agriculture

As India is mainly an agricultural country the children should be early taught about Gardening and Agriculture. The children of Grade I will have mainly to observe and help in the work of Gardening and Agriculture of the older children at school and of their parents at home. But they should have a plot of land for themselves for growing flowers and vegetables. Special gardening tools should be prepared for them. They should be told about the parts of plants, the development of plant from the seed, the requirements of plants and of friends and animals. Grade II children should know how to sow, to dig, to plant, to water and to pick out insects.

In Grade III children should learn about the functions of roots, leaves, and flowers and seeds, the germination, of the manures, pests, crops, the life history of the butterfly etc. They should know also how to prepare the soil, to put manure, to harvest, to store seeds, and to rear the caterpillar. In Grade IV they will know about the preparation of land, manuring, protecting, keeping farm accounts, ploughs and their use, poultry farming etc.

The pupils in Grade V should be able to grow vegetables all the year round and help in the cultivation of the field crops, if there is a farm attached to the school with Agriculture as the main industry. They should conduct field experiments in special small plots and note the effects of

* The teacher may with advantage refer to the Village Survey Chart given by W. M. Ryburn in his book, THE PROGRESSIVE SCHOOL.

manuring, weeding, etc. They should also study soils, crop pests, monsoons, and methods of preparing manures. Pupils will be required to work in the fields and carry out all operations in growing crops.

XII Kitchen Work

Work in the kitchen should be organized as a part of the educational programme wherever a hostel is attached to a Basic School or where there is provision for a School Meal. The Practical Work should consist of cleaning of grain, arrangement of water, cleaning kitchen utensils, cleaning dining place, preparing meals, sewing, and taking care of milk and milk-products. This practical work should be accompanied by a study of balanced diet, preparing kitchen accounts, reports of work in the kitchen, etc. This is for the pupils of Grade IV.

Pupils of Grade V, in addition to the work outlined for Grade IV, should be able (1) to take responsibility for the management of the kitchen for a definite period ; (2) to take charge of the Kitchen Store, issue daily ration, keep accounts, maintain Stock Book and ledger ; (3) to plan for cooking and serving a complete meal for a given number of persons ; and (4) to plan balanced diets.

In addition to the above-mentioned Practical Work, the pupils should learn about (1) the ways of storing grains, vegetables, fruits, milk, oils, etc ; (2) the proper way of cooking ; (3) the food requirements of the body ; (4) planning balance sheets ; (5) preparing monthly estimates ; (6) preparing reports, charts, etc.

XIII Physical Education

Physical Education is provided for throughout the seven years of Basic Education under four heads : (1) Free Activities, (2) Organized Activities, (3) Formal Activities, and (4) Necessary life Activities. The children will have under (1)

Correct sitting and standing postures, running, jumping, climbing, skipping, swimming etc., under (2) Games, Group Dances, Excursions, and under (3) falling in, walking and running in line, halting, balancing, etc.

We find these thirteen main subjects mentioned in the Revised Basic Education Syllabus published by Principal E. W. Aryanayakam, Secretary, The Hindustani Talimi Sangh, Sevagram, Wardha.

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CHAPTER L

TIME-TABLES

A Time-table is a statement showing the entire routine work of all the classes of a school for the working days of a school-week. It is the orderly arrangement of the work of the different classes distributed among the several members of the staff of the school.

The Importance of Time-tables

(a) A good Time-table secures order and regularity of work on the part of both pupils and teachers. It will enable every teacher and pupil to know the work he has to do, when he should begin to do it, and when he should end it. This ensures *thoroughness* and *regularity* of work, and also *order* and *discipline*.

(b) A good Time-table provides for *recess* and *recreation*. And so children will not be subjected to weariness and overstrain. The children develop habits of *regular* and *systematic* work which will be a valuable asset to them in their after-lives.

(c) A good Time-table gives due share of attention to different subjects. The most important ones receive the greatest share of attention, while the easiest are not neglected.

(d) Further, a good Time-table takes into account the *circumstances* and *conditions* under which the school works, so that the times allotted for work may suit those conditions and circumstances of the locality.

The question of the Time-table involves the *problem of fatigue*. Under a good Time-table the use of mental power is economised and relief from mental strain is afforded.

The Problem of Fatigue

In discussing the details of fatigue we noted in a previous chapter the fundamental position that every mental activity has an accompanying physical process. That is to say, it involves an expenditure of nervous energy. Therefore, the quantity of mental work that can be expected at any time depends upon the amount of available energy. In order that the Brain may be maintained in a state of efficiency, it needs a normal amount of exercise. If, however, the exercise should occupy too long a time or should be repeated too often, the result may be fatigue or strain.

A badly organized school where the *hygienic conditions* are not satisfactory is liable to bring on fatigue all the sooner. The air in most schools becomes heavy even after the first period. It goes on like that till the end of the day when the peons lock up the doors, so that the bad air again comes to be used the next morning. It will, therefore, be very advantageous to get pupils to breathe in slowly and deeply pure air several times in the day. Breathing exercises in the open air may be a part of the daily school routine for children.

It is not the quantity of work done alone that brings on fatigue. It makes a great deal of difference whether the individual likes his work or not. One who has not his heart in his work gets easily fatigued. The teacher, therefore, should secure proper hygienic conditions and also make his lessons interesting. The indications of fatigue in a classroom of children appear very soon. No period of work, therefore, should last longer than forty-five minutes.

The Physiology of Fatigue

We have already noticed the *physiology of fatigue*. Now we shall but recapitulate a point or two in this connection. Fatigue was once regarded as a result of an exhaustion of

the strength of the muscle. This notion has been now greatly modified.

In the first place, it should be noted that *all life implies activity*. Chemical processes constantly go on in the substances that compose the body. So these substances are being made and unmade. Even when a muscle or a nerve is at rest there are these two processes,—a process of breaking down, and a process of building up. When a muscle or nerve is in a state of activity the expenditure is quickened. Sometimes there is a ~~run~~ even into the living capital, so that the capital may happen to be spent up so rapidly that it cannot be recouped as fast as it is being used up. A period of rest is, therefore, needed to restore the original amount of power. The period of rest is a positive period, in which ~~the~~ building up process goes on. It is appropriate that such an interval is called the period of *re-creation*, or building afresh.

In the second place, the chemical processes mentioned above leave *waste products*, which in the normal course are washed by the blood. Now fatigue is due also to the poisonous accumulation of these waste products. If, however, the flow of *blood should be ample* and *the supply of air should be ample and pure*, the impurities are soon washed away.

The Psychological Principles involved in Framing Time-tables

(1) For a long time it had been recognised that in drawing up of a Time-table the most exacting subjects should come in first, that is in the morning hours after the night's rest. But now experiments in regard to the problem of fatigue have shown as to what the most exacting subjects are. It has been found that subjects involving *abstract ideas*, and subjects that require *drilling* in forms as in grammar, bring on fatigue sooner than lessons requiring actual contact

with concrete objects. Subjects have now been arranged in the following order of difficulty :—

Mathematics	...	100
Ancient and Modern Languages		90-91
Gymnastics	...	90
History and Geography		85
Mother-Tongue	82
Nature Study : Natural History		80
Drawing		77

(2) It is not alone the work requiring the greatest depth of thought that causes most fatigue. Any prolonged and unbroken chain of associations brings on fatigue, so that not the historian or the psychologist only but the mathematician also easily gets tired even with simple addition if required to total up a long row of figures.

(3) Another point that has been noticed by research workers is that individuals exhibit a kind of *rhythmic change* as regards the exercise of their energy for purposes of work on any day. For example, it takes the pupils of a class some little time to settle down to work under the school conditions. That is, they take some time before they get into what is called the 'Swing of work'. It has been found that on a free day like Saturday the capacity for work is highest in the morning. It gradually decreases till noon, and it begins to rise at 2 o'clock often to a point higher than the morning maximum. Then it gradually falls practically, and then rapidly. On a working day the decline is more rapid, the afternoon maximum being lower than that on a free day.

(4) There seems to be also a difference in the capacity for work due to the *conditions of the season*, the capacity being comparatively high in the cold weather and low in the hot months.

Boring should be specially avoided in all things. Joyousness should be the key-note. Let children be happy throughout the entire day.

The present-day notion, on the whole, seems to be that the most suitable periods for the more difficult lessons are the latter part of the morning session. But this is not as yet a matter beyond doubt.

Practical Considerations in the Regulation of Class Lessons

(1) In the first place, we should *secure favourable hygienic conditions*, should avoid all the injurious effects of bad lighting, insufficient ventilation, uncomfortable seats and desks, and any undue forcing of the more delicate muscles as used to be the case when pupils were required to use very early slates, papers and pencils. The teacher should also by his personal experience develop in his pupils hygienic habits and ideals.

(2) It has been found that *aesthetic influences* are a great remedy for fatigue. Hence the teacher should secure school-room decorations, artistic furniture, nicely laid out compounds and gardens. Also provision should be made in the Time-table for subjects like Drawing and Music.

(3) Another practical point is the *regulation of class lessons*. As has been already noted the *more difficult subjects have better be taught in the morning session*. As regards the order and arrangement of subjects, care should be taken to see that the *consecutive subjects are as widely different as possible*. A subject like Nature Study which appeals to the eye may alternate with listening to the Story. After all, the change from one subject to another can afford relief only to a limited extent. It will, therefore, be improper to take a class which has just finished Arithmetic through a Grammar lesson equally exacting.

(4) As regards the length of the lesson, it has been laid down after careful investigations, that with children between 5 and 7 years the lesson shall not last longer than 15 minutes and not more than two hours a day in all ; between 7 and 10 not more than 30 minutes and 3 hours on the whole ; between 10 and 12, not more than 35 minutes and 4 hours on the whole ; between 12 and 14, 40 minutes and 4 hours on the whole.

<i>Age</i>	<i>Duration of lesson</i>	<i>Total number of hours a day</i>
5-7 years	20 minutes	2 hours a day
7-10 „	30 „	3 „
10-12 „	35 „	4 „
12-14 „	40 „	4 „

(5) Some advocates of reform are for dispensing with the evening sessions altogether. But if they should be found necessary, they should not commence until two hours after the mid-day meal.

(6) Another suggestion is that instead of making Saturdays whole holidays, Wednesdays had better be half-holidays with another half-holiday on Saturday.

(7) The current opinion is also that very little work should be set by way of Home Work or holiday task for the vacation, and both pupils and teachers are advised to utilize the holidays in enjoying the needed rest.

(8) For relief pupils are sometimes taken through some kind of physical exercises during the course of the day. But *this is a mistake*. The performance of anything like the gymnastic exercises will demand an amount of attention and will-power which are sure to be as exacting as any of the most intellectual work. Games, however, may afford relief. There is a great deal of variety about them, and they afford

delight and enjoyment which are considered to be the best of tonics. So these may be resorted to.

Further practical hints in framing Time-tables

(1) Determine first the number of periods per day whether 6 or 7.

(2) Fix the duration of each period according to the age of the boys.

(3) Arrive at the total number of periods per week (30 or 35 or 36).

(4) Determine the number of periods to be allotted to each subject. Here the degree of difficulty should be taken into account. Languages and Arithmetic should be given a sufficient number of periods.

(5) Give morning periods to difficult subjects, and alternate them with easy subjects.

(6) Frame also the Teacher's Time-table.

(7) In the case of very young children leave a recess of 5 to 10 minutes between two periods.

When the school is manned by one or two teachers only the Time-table should be so adjusted as to admit of two different classes being instructed by the same teacher conveniently. Thus when one class is engaged in writing or active doing work, another class may be engaged in reading.

Specimen Time-table

A : FOR GRADES I, II and III

Periods for Week : 36 periods of 30 minutes each.

Allocation of Periods :

Craft	5	Mathematics	4	Art (Drawing)	2
Gardening	4	General Science	4	Mother-tongue	5
Cleanliness & Health	3	Social Training	3	Music and Dance	2
		Stories	2	Physical Education	2
					Total : 36 Periods

Forenoon							Afternoon					
Periods	7 to 7-10	7-10 to 7-40	7-45 to 8-15	8-15 to 8-35	8-40 to 9-10	9-15 to 9-45	9-45 A.M. to 3 P.M.	3 to 3-30	3-40 to 4-10	4-10 to 4-40	Evening	
Monday	Songs and Roll call.	Craft	Mathematics	Outings	General Science	Cleanliness & Health	Recess	Mother-tongue	Social Training	Gardening	Games	
Tuesday		Do.	Do.		Do.	Do.		Do.	Do.	Do.		Music and Dance
Wednesday		Gardening	Craft		Do.	Do.		No	afternoon session.	Stories		Physical Education
Thursday		Do.	Mathematics		Do.	Art (Drawing)		Mother-tongue	Do.	Craft		Do.
Friday		Do.	Do.		Social Training	Do.		Do.				
Saturday		Stories	Mother-tongue		Craft	Music & Dance		No	afternoon session.			

Specimen Time-table

B : FOR GRADES IV and V

Periods for Week : 36 periods of 35 minutes each.

<i>Allocation of Periods :</i>	Craft	4	General Science	4	Art (Painting)	2	Total: 36 Periods
	Agriculture	4	Social Studies and Training	3	Music and Dance	2	
	Mathematics	4	Cleanliness	2	Physical Education	2	
	Mother-tongue	4	Hindustani	4	Cooking	1	

Periods	Forenoon					Afternoon					Even- ing
	7 to 7-10	7-10 to 7-45	7-45 to 8-20	8-20 to 8-35	8-35 to 9-10	9-10 to 9-45	9-45 A.M. to 3 P.M.	3 to 3-35	3-35 to 4-10	4-10 to 4-45	
Monday	Songs and Roll call.	Craft	Mathematics	Outing	General Science	Cleanliness and Health	Recess	Mother- tongue	Social Studies & Training	Music and Dance	Games
Tuesday		Do.	Do.		Do.	Do.		Do.	Do.		
Wednesday		Agriculture	Agriculture		Do.	Hindustani		No	afternoon session.		
Thursday		Craft	Mathematics		Hindustani	Art (Painting)		Mother- tongue	Hindustani	Physical Education	
Friday		Agriculture	Agriculture		Social Studies & Training	Do.		Do.	Craft	Cooking	
Saturday		Physical Education	Mathematics		General Science	Social Studies & Training		No	afternoon session.	session.	

CHAPTER LI

THE CLASS AS WORKING UNIT

The Teacher

From the point of view of School Organisation, it is the Class that is the unit. The Class is an aggregate or group of individuals for purposes of a common and definite course of instruction and training. The Teacher with reference to his Class is unlike a Lecturer to an audience or to a College or University class. In the latter case, the Lecturer simply expounds a subject and is not concerned whether his audience is properly instructed in it or not. The Teacher, on the other hand, is interested in the individual pupils and must care for their proper understanding. He must, therefore, control their behaviour, rouse their interest and fix their attention. He has to question them now and then to know how they are following him, clear their doubts and enliven the dull and the inattentive. He must bring round the obstinate in a tactful manner. He must revise and elaborate his remarks to reach the level of their understanding. Hence the Class should be a manageable group. The Teacher is *for the class* and not *vice versa*.

The Size of the Class

The *size* of the class should be such as to be easily managed and to facilitate the maintaining of order. The size, therefore, is in accordance with the ability of the teacher. According to the prevailing rules a maximum of forty pupils is prescribed for a class. But we agree with the recommendations of the Basic Education Committee that the proper number of pupils in a class is thirty and not forty. There must be some uniformity of the attainments and abilities of the pupils to be grouped together. The room should not be overcrowded; and must be of moderate size so that it may be in the close

range of the teacher's vision. In the practical science classes the number of pupils should be much smaller than in the teaching class. The same thing holds good with regard to the music classes, inspirational lessons, etc. In other words, it depends on the amount of individual attention that the teacher can bestow with ease without detriment to the progress of the instruction. Large classes are possible where more lecturing than teaching is expected, as in the Collegiate departments. Within certain limits, the bigger class of a College has some advantages, like those of fellowship in learning and consequent group-interest, friendly emulation, and the larger focussing of attention by a sort of group consciousness. Greater amount of confidence is found in the pupils when they are sufficiently large in number. There will be also one unifying emotional sympathy uniting the teacher and the taught, when the teacher is an able person and the pupils are interested in being instructed. The teacher himself gets more inspiration to teach when the number is sufficiently large. But, on the average, the classes in a school should be limited to thirty for efficiency, but not forty, as the Madras Educational Rules require.

Three Systems of Classification

If there be no proper *classification* of pupils, the teacher's time becomes wasted and control becomes difficult ; there will be a tendency for the teacher to become angry and punish some recalcitrant pupils. The pupils will have no stimulus to improve or emulate as competition becomes unfair ; and there can be no uniform standard for teaching. Any value that may result, like, e.g., the students falling back more on their own resources, from want of classification, will be negative and indirect.

There are three systems of classification : the *single* or rigid class system, the *free* or manifold system, and the *mixed* system.

(1) *The Single Class System.* This System is that according to which each student is placed in the same class for all subjects. A definite amount of work is expected in an year in all the branches of education and pupils are supposed to make corresponding progress in all the subjects. The whole class works as a unit. This system involves no complexity and is simple to organize. It has a broad basis of general education, and correlation of studies is easy to make. It may, no doubt, involve some extra burden on the students.

(2) *The Free or Manifold System.*—This means separate classification of pupils for each branch of study. This system is advantageous in that the abilities of students and their attainments are separately cared for and properly adapted to their needs. But the disadvantage is regarding the teacher's responsibility to the pupil. The system entails too early specialisation. Correlation of studies becomes difficult and impractical because of the different courses of study in different subjects.

(3) *The Mixed System.*—It means that a pupil need not work in the same class in all the subjects, but may be in different classes for some subjects. It combines the principles of the Single Class System and the Free System.

In England, in secondary education for pupils above the 14th year, the Single Class System is adopted for some studies and the Free or Manifold System for other studies like mathematics, science and modern languages. Promotions take place in these studies independently of the promotions in the "form-subjects", i.e., in the Single Class System Subjects. The student thus comes under two classifications. The Mixed System is permitted under the Madras Educational Rules under Rule 30. "It shall be permissible for a pupil in any class to study any particular subject or subjects along with other pupils of any higher class at the discretion of the headmaster, but for all other purposes of these rules he shall be

considered as belonging to the lowest class he is studying." The mixed system is advantageous to the pupil of special talents, but it is very cumbersome to manage.

One-Teacher Schools (Ungraded Schools)

These are found in villages thinly populated, where pupils are very few and cannot be compelled to be regular. The teacher also is poorly paid and has scarcely any social status. Though all the pupils are managed and taught as though they were of one class, the teacher has also to look to the special needs of any brilliant boy and consequently his task is a difficult one. Proper financing of such a school and giving assistants to the teacher are necessary. Bray suggests the following arrangement for the proper management of such schools. History, Geography, Grammar (Language) and other class subjects should be taught in two sections only. Subjects that lend themselves to individual and private effort should intervene between oral lessons. Individual effort should be fully encouraged. The lessons on the class subjects must be the chief means of moral and intellectual training of the pupils. If the boys are of different attainments, class instruction must have two sections, a lower (I to III standard) and a higher, and the Time-table should be so arranged that while one section is orally engaged, the other has writing or silent work. The syllabuses should be adjusted to the two sections, and room for adjustments should be allowed. For the Three R's sectional treatment is unnecessary. The teacher can prepare himself to deal with the sections with sufficient adequacy.

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CHAPTER LII

PROMOTIONS :

THE CURSE OF EXAMINATIONS AND THE REMEDIES SUGGESTED

Marks

Promotions are generally made on the basis of a percentage of marks obtained by students in an examination specially conducted for the purpose, and also on the marks given to them during the year for work assigned to them as well as on terminal examinations. Of course, it is a mechanical method. Better alternative tests for promotions are yet to be discovered and accepted. By these examinations, it is said, demoralising influences enter into the cases of those who fail, who are grown-up lads and who are detained to study again with their juniors. Not only are these detained fellows backward, but they might also spoil their juniors by association. These detained fellows sometimes remain for years in the same class and tend to bring the institution itself into bad repute.

Age.

An alternative is sometimes suggested that classes should be marked off according to *age* considerations. This will, no doubt, be useful from a psychological point of view in enabling the backwards to pull up and not get demoralised, by being detained and associated with their juniors. It is doubtful, however, if it is educationally sound or just to promote one who neglects his studies in the year and is put in a senior class simply because of his seniority in age. The problem can be solved by the bifurcation into divisions of a class—the juniors and new recruits making up one division and seniors and detained students another division,—if the

institution can financially allow the consequent multiplication of teachers and classes.

The Problems of the Detained Boy and the Specially Bright Boy

There is no necessity to think that the detained students have anything abnormal about them requiring their segregation, or that promotion by examinations is an unmitigated evil. Care should be taken in admitting new students in a school. If the teaching and the tone of a school are high and some amount of special care in the negligent boys is taken, the necessity for detentions becomes practically nil. As an offshoot of the problem of special classes for the "backward" students, we have also to consider if special instruction is not necessary for the mentally advanced type.

Such specially advanced students as require special coaching are, however, very much rarer than those deserving detention. If the majority surpass the curriculum, then it is the curriculum that must be altered. In the middle of an year no advantage can accrue to one by getting into a higher class. It will only spoil one's education. A "double promotion" also entails extra effort to both the pupil and the teacher. There is nothing that can be gained as a real value in life by such hastening of education. The excess time can well be spent in learning some extra-curricular subject with its own intrinsic value either as a hobby or a handicraft. A bright boy will be a useful influence in the class rather than otherwise. Cultivation of Hobbies and learning Crafts is the best useful diversion for brilliant boys.

Cross-Classification and Double-Classification

Cross-classification and *double-classification* of pupils are the same as what we previously considered as the "Manifold" system and the "Mixed" system of classes. In the western countries some of these methods are tried. A pupil might

belong to two or more classes at the same time according to his attainments—a higher class in one subject for which he has special aptitude and a lower one with regard to other subjects. If it be in two classes only, it is double classification. It may be also sometimes that a pupil belongs to different classifications in different subjects—when it is the *whole* school that forms a *single unit* as it were, and not a class. It may be possible to do so,—but *in the end*, i.e., at the end of the school course (when he is to appear at the Public Examination in all the subjects at the same time), what is the advantage? These various methods of classification may be useful in their own way; but what is required is to organise an institution as a unitary and economic system of scheme and not to cater to contingent conditions.

Oral and Written Examinations

In *oral* examinations no papers are set, but questions and answers are oral and so time is saved. Mistakes can be pointed out simultaneously, and students obtain the advantage of knowing their mistakes. They give good training in expression, and confidence can be created in the students. It is helpful to those who talk better than write. It is practicable only in some subjects. It is a variety of *practical test*.

In *written* examinations, the questions being the same, comparative merit is easier to decide. The number of questions is smaller and does not tax the examiner's resources. A better testing of *general* abilities in a subject is here possible. The answers can be better formulated. The nervousness of an oral test will be absent when answers are written down for oneself. Personal element is eliminated. The answers can be better judged for marking purposes.

There is the traditional *Essay* type of answers. This is criticised as an unreliable test because under examination-fear some pupils are not able to do their best. All are not equally

capable of essay-answers. The answers are not capable of being judged alike by different examiners or by the same examiner at different times. There is more chance-element in the answers, both in the interpretation of the question and the answer. It encourages cramming and resort to text-examiners and 'made-easies'. The knowledge of the candidate may be confined to the so-called important points and may not be deep in the subjects. This method encourages cheating tendencies. It is unfair to the teacher when he is not the examiner; and it is unfair to the pupil because his generalabilities cannot be exhibited by a single examination. It takes more time to value and hold the examination, and when valuation is hurried it becomes disadvantageous to the pupils.

The New Examiner

This method attempts to eliminate the defects of the essay-type answers. A large number of small questions which require word-answers or single sentences, are given. Sometimes it is mere underlining or cross-marking that suffices as an answer. The question-paper is a small booklet, and the questions are of the nature of true-false tests, completion or recognition tests, and they are sometimes about a hundred to be answered in an hour. The questions are 'fool-proof', each requiring only one answer.

The New Examiner is said to be reliable and objective. Memory requires no straining here. It tests one's judgment power and broader outlook of things. The whole subject of study can be better covered in a shorter time than the essay-type by the very large number of questions. The test is not one of dry undigested facts but of one's ability to correlate and manipulate them. The tests are standardized—like the Intelligence Tests in Psychology—so that no special advantage is shown to any particular type of students. The Public Service Examinations, where tests

are conducted on these lines, are a good example. S.S.L.C. students sit along with Honours graduates and sometimes do better. The "New Examiner" tests are time-saving—(setting questions, however, requires specialists and much time)—both for conducting and valuing the answers. Being fool-proof, the answers can be marked even by a clerk with the answers in his hand.

REMEDIES SUGGESTED FOR THE EVILS OF EXAMINATIONS BY ZAKIR HUSSAIN COMMITTEE OF THE BASIC NATIONAL EDUCATION

It is no doubt true that the System of Examinations now prevailing in our country has proved a *curse* to Education. The Zakir Hussain Committee say that "a bad system of education has, if possible, been made worse, by awarding to examinations a place out of all proportion to their utility." Examinations are neither valid nor complete either as a measure of the work of individual pupils or the schools. There should be no hesitation whatsoever in taking every possible care to guard the future pupils and students of Free India against the two baneful influences of the "Curse" of Examinations, without impairing the efficiency and well-being of the young ones of the country.

It is rightly suggested that the purpose of the examination can be served by "an administrative check of the work of the schools in the prescribed area by means of a sample measurement of the attainment of selected groups of students conducted by the inspectors of the Education Board." These tests should be constructed "in close consultation with the specialists responsible for curriculum revision." It is also suggested by the Commission that "they should be long enough to cover the whole range of the curriculum and should be in a form which makes marking objective and independent of individual judgment." A check-up of this kind will add

to the efficiency of the School System and will save at least six weeks of the final class which is now usually wasted on "memorizing notes" and "revisions", which head-ache precedes the final head-ache of the ordeal of an external artificial examination. It is this period that is now suggested to be devoted to a test of efficiency of individual pupils in the Basic Craft over a period of weeks, to be determined from case to case, and "to comparatively more intensive work for the improvement of the village community which the school serves."

Promotions according to Basic Education Scheme

It is the teaching faculty of the school that should decide the promotions of pupils from Grade to Grade on the basis of careful records of the pupils' work. An annual testing of typical sections from each grade of the Schools of the various divisions should be conducted by the Board of Education for the purpose of maintaining the desired level of efficiency throughout the School System. Pupils should not be made, as far as possible, to repeat the work of any Grade or any considerable portion thereof. There is hardly any justification for making pupils repeat the work of a Grade if there are proper checks on their work from time to time during their entire course in the year by the teachers themselves.

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CHAPTER LIII

GENERAL INTELLIGENCE TESTS

Intelligence, Intellect and Instinct

Intelligence is not the same as Intellect. The latter represents our cognitive faculty as such. The word, Intelligence, is generally used in a practical sense, namely what one's intellect enables one to accomplish. In life, therefore, we are interested in Intelligence rather than in mere Intellect. Intellect is given to each, as his cognitive faculty, once for all. Education is concerned with improving the Intelligence of the pupil by giving training to his Intellect.

Again, Intelligence is distinguished from Instinct. Instinct is the inborn ability to do certain things without previous learning, whereas Intelligence is due to training and experience. Intelligence is the acquired ability to perform consciously intelligent actions to discover new truths. Instinctive actions exhibit a sort of mechanical uniformity. Variation in the response in accordance with the change in the situation is a work of Intelligence. In this sense Instinct and Intelligence seem to be opposed to each other. But they are opposites only on the surface. Intelligent action is possible only on the basis of Instincts. Even the Intellect has to be taken as a kind of *congenital endowment to know* just as Instinct is *born ability to do*. The relation between Instinct and Intelligence is like that between hereditary or ancestral abilities and acquired abilities.

In other words, Intelligence is the result of Intellect reacting on instinctive abilities through personal experience and thus acquiring new and conscious abilities to successfully react on novel situations. By our Intellect we are capable of acquiring knowledge; but we may not be able to work with it until we experience its use as well. One may know how a

machine works, without being able to work with it. Woodworth defines *intelligence* as "acting according to the situation in hand, using what has been learnt before, and with due regard to what is novel or unfamiliar in the given as well as to the *whole situation* rather than to some merely striking part of it." The problem for Intelligence, of course, need not be merely practical; it may be also theoretical like some scientific problem.

Measurement of Intelligence

Binet-Simon Tests and Galton-Cattell Experiments

Intelligence Tests were first introduced by the French Psychologist, Binet, assisted by his colleague, Simon. The tests are known after their joint names. These tests were made to find out backward children and to devise methods for their special education.

Galton (an Englishman) and Cattell (an American) devised earlier, tests for measuring separate mental abilities. They were not able to produce a Scale for General Intelligence. Binet succeeded in doing this. He used a combination of different tests to approach Intelligence from different aspects; he made no assumptions about the suitability or otherwise of a given test for physical age, but employed a scale of *mental age*. He did not think that any *single* test would be a fair standard, as children differ in aptitudes. Earlier opportunities for certain children and lack of them for others, would prejudice any testing by a single performance. School-knowledge was not used for testing, since its benefit would vary with different children. His tests were for the knowledge that could be picked up normally from *environment*. The tests were many and of a miscellaneous type so as not to handicap any children. Thus he included abilities for memory, reasoning, comparing, comprehension of times and number, apperception, mental synthesis, knowledge of

common subjects, contradictions, etc. He did not start with any *a priori* grounds of suitability of any tests according to biological age. After much labour he devised a standardised scale in 1911 before his death. By these scales he devised Tests for the ages 3 to 10, 12 and 15. Thus tests were fixed for these ages in such a manner that normal children could pass them from 65 to 70 per cent. Using such scales it was possible to find out whether a child of a particular physical age was mentally normal, or above normal or below normal in its mental capacity. That would give its *mental* age. All subsequent development in measuring Intelligence was founded on these Tests of Binet.

The following are examples of Binet's Tests. At 3-year level, Naming Familiar Objects, 60%, in a group of objects shown. At 6-year level, Finding Omissions in pictures shown, 3/4 must be the success. At 8-year level, Giving likenesses between two familiar things, 2/3 correctness required. At 12-year level, a Language Test where 40 out of 100 words of common use should be correctly described; and so on. The standards for fixing percentage for pass were not arbitrary, but were fixed by a calculation of *averages*, by *statistics*.

Terman's Measures of Intelligence

This Mental age Test of Binet does not take us beyond telling us whether a child is bright, average or dull. Definite measurement of Intelligence is not possible by this method. An estimate of brightness or dullness could be obtained by what is called Intelligence-Quotient, IQ, conceived by Terman. It consisted in dividing Mental Age by the Physical Age. The average which is 1 is represented by 100, so that fractions could be avoided; i.e., we multiply the fraction by 100 and express the result in units. For example, 12/8 would be 150, and 8/12 would be 67. These IQ figures will inform us not only the actual knowledge of the child but

also how much he is in advance over his age or average. From these results some statistics are produced to show the percentages of the differently capacitated children in a community ; e.g.—

IQ below	70	gives	1	p.c. of children
	80	„	5	„
	90		14	
	100		30	
	110		30	
	120		14	
„	130		5	
Above	130		1	

Classification of Individuals

Individuals according to the IQ are classed, starting from 25, as idiots, imbeciles, morons, border line (70–80) ; dull average, superior (110–120) ; and above 140 geniuses. The average IQ is the same for all ages, and the IQ of an individual remains very nearly constant throughout life. Disease makes irregular development.

Performance-Tests and Group-Tests

Binet used *oral* tests. These could not be unequivocal or universally applicable. For, what of those who are deaf or otherwise unable to follow the language? Further, there are certain fundamental differences in children regarding their concrete or abstract type of mentality, and these cannot be properly brought under test-control. So, another variety of tests, called “ Performance-Tests ”, were introduced. Such are what are known as the Form Board Tests (differently formed blocks to be fitted into appropriate holes in a board—a study of forms), Picture-Drawing, Picture-Complementation, the Maze, etc.

Where Individual Tests were not practicable, Group Tests were introduced. These were greatly used in the Great

War when America joined the Allies. Since military training had to be given quickly, and all men were not of equal abilities, they had to be grouped into various classes for the training to be longer or shorter. High Grade Intelligence had to be trained for Officers, and Feeble-mindedness had to be eliminated. Group Tests were found to be of great value—like our *Public Services' Commission Board's Examination*—and have come to remain as useful Intelligence Tests.

The Value of Intelligence Tests

We test a Test by its *validity*, *reliability* and *objectivity*. *Validity* means that the measurement by one Test must correspond with that by some other objective test. The Test must be a real and valid Test. Intelligence tests must help us to predict about the future performances of the candidate. *Reliability* is determined by the uniformity of answers by the same pupils when the Tests are repeated by the *same* examiner. The *objectivity* of a Test lies in its giving identical results when *different* examiners apply the same Test to the same set of examinees. This last characteristic gives best guarantee for the *value* of the test.

Sandiford mentions 3 main uses of the Intelligence Tests : (1) *Classificatory*, where the mental age is considered for classing and the IQ for sectioning ; (2) *Diagnostic* : " individual " Tests are more useful here ; and (3) *Prognostic* : this is of value for the preparation of a pupil for his future, intellectual or vocational. It will be valuable in avoiding false choices of a career, and in choosing what is suitable to one's attainments and aptitudes.

Limitations of Intelligence-Tests

Woodworth points out some limitations of these Intelligence Tests : (1) Ability to manage concrete things—except with the help of Binet's Performance Tests—cannot be given by mere Intelligence Tests. (2) They do not help us in knowing

the ability to manage *persons*. A leader of men need not be highly intelligent; tact is wanted and this cannot be easily tested. Understanding of people appears to be a different complex faculty depending on many factors. (3) A high IQ will not tell us of the future in life, whether the candidate would shine or not.

It is necessary that every school should have on its Staff a member who knows how to wield these Tests with knowledge and care so that the pupils may be grouped and helped in every other possible way.

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CHAPTER LIV

EDUCATION FOR GIRLS

Co-Education

Co-education has not much scope in our country—because even in adults, free association where sex is forgotten and people meet as human beings, is not the custom as in the West. It is only now that we are seeing signs of such association through the development of political consciousness. The Purdah System is still the fashion among some Hindus, specially the richer and ‘higher’ classes, as among Muslims. Early marriages, the social discredit of maidenhood, and religious superstitions, make it impossible for girls to go beyond the elementary stage. Higher education in Colleges has been recently coming into vogue along with the awakening of self-consciousness in women—due to a large extent to the cultural influence of Western women in India. Co-education at present seems, therefore, impractical. Even in the West there is a strong opinion against co-education between 13 and 18 years—the high school age—since during that period changes in physical and mental conditions rapidly take place and boys and girls should not be left completely to their freedom. In early education period sex-consciousness is absent and after eighteen self-respect or self-regard is strong enough normally to prevent mishaps. It is the transitory period that must be guarded, because it is the formative period of character and is very suggestible.

From the “educational” point of view the advantages and disadvantages may be summarised.

Advantages of Separation

Neither boys nor girls are retarded in subjects for which they have natural aptitudes. The class-work can go on

without breaks. Boys' discipline and girls' are not identical and therefore can be better controlled in separate classes. Boys are better taught by men teachers and girls by women teachers. The curriculum can be better adapted to their respective needs which are not identical. The qualities of men and women not being identical, the moral influence on each can work better by separation. Boys in the adolescent stage become either too shy or too forward when associated with girls of their own age, and their attention is likely to be distracted from their studies.

Advantages of Co-education

Organization of work in small co-educational schools is easier. In general subjects classification is easier. Co-education, when managed properly, tends to check abnormal sexual precocity by creating a spirit of comradeship. It is a preventive of shyness on either side and tends to make them forget sex difference and foster sentiments of wider humanity. Pathological self-consciousness is checked by free association and co-education. Girls learn to be first *human* before they are women. Boys can learn to be respectful to the opposite sex. Competition with the opposite sex fosters good application to studies. Boys can learn gentility, patience, and fortitude and are thus better prepared for life in the real world. There is value in knowing the nobler nature of the other sex.

Should there be Separate Education for Women?

It is doubted sometimes, if boys and girls can have the same educational curriculum. Does not nature intend that their functions are different, and consequently their training should be different? Is not our modern civilization un-sexing women and making men fight shy of family life? These are the doubts which some people have.

Women, no doubt, are as intelligent as men. But it cannot mean that they should be treated alike for education if education is to reflect on the future real life. The functions of the two sexes are different both biologically and psychologically, and Education must be rooted in biological and psychological characteristics. It is for *co-operation* in life and not for *competition* that the two sexes are to be educated. It is on these lines some educationists think. But what is the truth about this matter? What is the kind of education that is needed for our girls at schools as well as for women at colleges?

The Uniqueness of Womanhood

Women are the mothers of the human race. And so they have a real interest in the things that are around them, in the common things of life. Whereas a man takes interest in his fellow-beings only when he finds in them some usefulness, a woman feels interest in her fellow-beings because they are living creatures, because they are human. That is the reason why she exercises such charm over our minds.

The domestic life, however, is not the only life for a woman. As Dr. Tagore says, "the human world is the woman's world, be it domestic or be it full of the other activities of life, which are human activities, and not merely abstract efforts to organize. Wherever there is something which is concretely personal and human there is woman's world."

The Two-fold Objects of Women's Education

And therefore those who are responsible for women's education should not lose sight of the two-fold objects *viz.*, to enable women not merely to be good wives and mothers i.e., "to keep up the hearthfires of the Nation,"—but also to play their part in Politics, Legislation and Administration of the Country, i.e., "to keep alive the beacon-fires of the Nation" (Sarojini

Naidu). They should be afforded greater facilities and opportunities for having higher education than they have had till now. As Ruskin says, "the first of our duties to her is to secure for her such physical training and exercises as may confirm her health, and perfect her beauty; the highest refinement of that beauty being unattainable without splendour of activity and of delicate strength. To perfect her beauty, I say, and increase its power; it cannot be too powerful, nor shed its light too far; only remember that all physical freedom is vain to produce beauty without a corresponding freedom of heart". Thus then the first thing to provide is for *the moulding and strengthening of her physical frame*. And then to the extent to which her strength and health permits, *her mind is to be tempered and filled "with all knowledge and thought which tend to confirm its natural instincts of Justice, and refine its natural tact of love."*

Girls' Education should be like that of Boys', though Differently Directed

Woman has a right to all such *scientific knowledge* as would enable her to understand and even to aid in all the work that man does. She has a right also to such knowledge of *languages* and *arts* as would enable her to "show kindness to a stranger, and to understand the sweetness of a stranger's tongue", and to attend to all those duties which an understanding and sympathetic *Grihini** has to attend in the matters of *Atithisathkara*.† So then a girl's education "should be nearly, in its course and material of study, as that of a boy; but quite differently directed". While man's education should enable him, as a member of the State, "to assist in the maintenance, in the advance, in the defence of the State,"—the

* 'Grihini' is the Sanskrit word for House-wife.

† 'Atithisathkara' means respectful treatment given to guests.

education given to women should enable her, as also a member of the State, *to assist in the ordering, in the comforting, in the beautiful adornment of the State*”, and to obtain the “*power to Heal, to Redeem, to Guide, to Teach and to Guard.*”

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CHAPTER LV

THE HEAD-MASTER AND HIS STAFF : DISTRIBUTION OF WORK

The Head-master

A Head-master should possess certain qualities and abilities which are necessary for commanding prestige among his assistants and pupils. He should have zeal and love which will be of real use to him in managing and directing the activities of the pupils in the proper direction. Fairness and tact, persuasiveness and resourcefulness, dignity and purity of character, self-control and organizing power, sound judgment and sympathy—all these abilities and qualities are essential for a job like that of the Head-master.

The Head-master is the hardest worked member of the staff and has to supervise the work and conduct and welfare of some hundreds of pupils of all kinds. He has also to organize and supervise the work and conduct of the members of his Staff. He cannot do much of teaching work, but his influence has to spread over the whole School in a substantial way and he must be noted for able and inspiring teaching. He has to visit the classes and give guidance to the teachers concerned without impairing their dignity and independence or lowering their prestige before their pupils.

The Glory and Poverty of the Teachers

The Staff in an Indian School consists of a strange variety of elements. Some members are there because they love teaching and some others are there in the school because there is no other place to go to. They know that it is a sorry trade and never give up grumbling. With starving wives and children at home and with no due respect and esteem among the public who usually look down upon ill-fed and ill-clad

poor teachers, it is hard life indeed for them! And there are always examination results to care for and inspections staring them in the face. Hard lot indeed! But if in some there is ability and zeal, they will be able soon to conquer and become like gods to their pupils. The best treasures of a genuine teacher are the love and esteem of his pupils. And to win these treasures the true teachers sacrifice their time and energy. The satisfaction they then get within themselves is their final and only reward!

DISTRIBUTION OF WORK AMONG THE STAFF

Three Systems of Distribution

It is a sound principle that the best teachers have a chance to teach the lower classes, and the most learned are assigned to the highest classes. The average teacher may be assigned the middle classes. The lowest class should be considered as a post of honour.

There are three systems under which the staff of a school may be distributed:—

(1) *The Class Teacher System*.—In this the Teacher takes the same class year after year. This system has certain advantages. The Teacher who takes the same class will have a thorough grasp of the difficulties of the pupils of the class and the best methods to be employed. But there are certain disadvantages also. The teacher fails to know his pupils intimately as they pass on from class to class whereas he himself sticks on to the teaching of the same class. Further, the Teacher misses the variety of teaching different classes. Thus through lack of variety, his interest flags and the teacher tends to become a bore.

(2) *The System in which the Teacher advances with his Class*.—In this the Teacher gets a deeper insight of his pupils through long association and is able to leave his influence on

them. And also, there is variety and interest in his work and a widening of his experience. But, on the other hand, the pupil's outlook is narrowed on account of its being confined to contact with only one teacher. When that one Teacher happens to be a mediocre, this system proves to be ruinous to the pupils.

(3) *The System known as Specialization.*—According to this system, the Teacher specializes in one particular subject in which he has interest. He increases his knowledge in his Subject and is devoted to it with great zeal. This ensures method, broad treatment and vividness of teaching his Subject. This ensures also that the outlook of the pupil is widened by contact with a number of experts. The disadvantage in this system is that no one Teacher has moral control over the pupils on account of his work being scattered over the whole School. But specialists seem to suffer from a narrowness of vision, and it is not all Teachers that seem to be fitted by tact and temperament to handle every class.

Which is the Best System ?

From a practical point of view, what works best seems to be a judicious combination of the System of Specialization and the Class Teacher System. The Subject Teachers create interest in the Subjects, and the Class Teacher, being interested in the class, is responsible for the mental, moral and physical education of the pupils. Thus a judicious combination of both the Systems will succeed in accomplishing the two-fold object of efficient teaching and healthy moral and physical development.

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CHAPTER LVI

SCHOOL RECORDS

A School should maintain at least the following Records. (1) Admission Register; (2) Fees Register; (3) Marks Register; (4) Register of Summaries ; (5) School Diary ; (6) Inspection Book ; (7) Order Book ; (8) Record of Progress Reports ; (9) Syllabus Book ; (10) Minutes of Staff Meetings. Every member of the Staff should keep a book of Notes of Lessons in each Subject he teaches.

Admission Register

In all Class Registers, the pupil's name should be entered in the same invariable order. This is a safeguard when marks, attendances etc., are transferred to the Register of Summaries from the Class Registers.

The name of each admitted pupil should be immediately entered in the Admission Register. A number should be given to each name. The entries should be the Date of Admission, Name, Address of parent or guardian, Date of Birth, Class to which admission is made, School last attended, Cause of leaving, etc.

The Fees Register

In this register the fees collected and the dates of payment should be noted.

Receipts and Disbursements Register

This register should show accurately and truthfully the fees collected, the award of grants and scholarship amounts, and the items of expenditure and any other necessary financial details.

School Diary

This should be a thick volume sufficient for a number of years. Entries should be occurrences regarding the School, Inspector's Visits, Visits of Managers, Change in Staff, School Events, Introduction of New Methods or Plans, Promotions, Unusual circumstances affecting the school etc.

Register of Summaries

This should summarise class attendances, promotions etc.

Head-master's Book

This is for the comments of the Head-master on the teaching etc., of the Teachers. The date and hour of his visit should be noted. Entries should be regarding teaching, discipline, class management etc. The teachers concerned should read and ponder over these remarks and be benefited. There should be no such thing as "confidential reports", which are so often used for stabbing teachers in the dark.

Order Book

This is for helping to co-ordinate and directing the work of the Staff. In this are noted all the notices sent round regarding violations of rules and remedies taken.

Staff Meetings Minutes Book

In this book the minutes of all Staff Meetings are noted. There are two kinds of such meetings, one intended for discussions and discourses on topics connected with methods of teaching and problems regarding discipline, management, etc. At these meetings there should be no harangues, but only free talks on problems, doubts and solutions.

The meetings of the second kind are intended for the Head-master to explain an order which has not been understood and so requires to be explained. No discussion is admitted, but questions are answered.

These meetings may be held under a Staff Club or Staff Association which may conduct a journal, run a school Co-operative Store, or manage school dramas, etc.

Register of Progress Reports

Reports of the progress of each pupil should be submitted to the parents periodically. The details to be given are noted in this register as indicated in the previous chapter on Aids to Discipline. Such reports are of immense use in getting the parents interested in the work of their children at the school.

Syllabus File

There should be a carefully prepared Syllabus for each subject taught in the School. The topics of each subject should be properly fixed and named, and fitted properly into one organized whole. The whole school course should be kept in view in drawing up these Syllabuses. Correlation can be indicated and planned even when Syllabuses are prepared. The subjects and topics should suit the locality and the general requirements of the pupils, rich or poor, urban or rural, advanced or backward. The Syllabuses should be such as are drawn with a background of experimentation and experience, and also as can be changed in the light of further experimentation and experience. There should be no such thing as finality and a dead level of uniformity. The Syllabuses drawn by the Basic National Education Revision Committee may be best consulted on this matter as has already been noted in a previous chapter of this book.

Teacher's Notes of Lessons

Notes of lessons indicate preparation without which no one can hope to be a successful teacher. They remove vagueness as regards the subject-matter and make it sure and vivid.

Even when the same lesson is taught once over preparation is necessary. Otherwise the lesson loses vividness and will become mere mechanical repetition lacking newness in material or method. The instruction has to be suited to the varying needs and experiences of different groups of children. Therefore illustrations are necessarily to be changed. That is why the same teacher should not try to teach the same lesson on the same lines. And no two teachers can ever teach the same lesson in exactly the same way.

The *object* of the lesson should be definitely noted. The *material* should be arranged under definite headings. *Questions* for education purposes should be framed and written down. The *apparatus* to be used should be specifically mentioned. The *method* of illustrating, preparing, presenting and recapitulating has to be previously thought over. And *Black-board work* sketches, summary, etc., should be previously thought over and noted.

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CHAPTER LVII

THE TONE AND ATMOSPHERE OF THE SCHOOL

What is meant by the School Tone? What does it consist of? How is it brought about? It may be said that the School Tone is connected with good discipline. But it is not the same thing as good discipline. A School may have good discipline and yet may not have Tone. On the other hand, there may be a School with an excellent Tone but without good discipline. It may, however, be said that the better the Tone, the more easy it is to secure discipline.

On What does the Tone of the School Depend?

What then does the Tone depend on? It depends upon the *ideals* of the School, the *prestige* of the Headmaster and his Staff, the fine delicate management and the *wise and high order of educative endeavour*. It consists mainly of *esprit de corps*, the common spirit. When this spirit exists side by side with school pride, it is possible to raise the School Tone immensely.

The Psychology of the Crowd

This spirit of the school depends upon what may be said to be the Psychology of the Crowd. Human beings tend to function in groups and not merely as individuals. Naturally these groups have common characteristics. Man is partly made by the Group. He has to adjust himself to the tradition of the group to which he belongs. As he grows he develops the traits of the group to which he belongs. Such a growth is helped by what is called the *Sympathy of Numbers* and the *Psychology of the Crowd*.

The Psychological Group

A Crowd, however, is not a Psychological Group. The essential character of a Psychological Group is best brought

out by McDougall in the following words: "There is is a dense gathering of several hundred individuals at the Mansion House crossing at noon every week-day; but ordinarily each of them is bent upon his own task, pursues his own ends, paying little or no regard to those about him. But let a fire-engine come galloping through the throng of traffic, or the Lord Mayor's state coach arrive, and instantly the concourse assumes in some degree the character of a Psychological Crowd. All eyes are turned upon the fire-engine or coach; the attention of all is directed to the same object; all experience in some degree the same emotion, and the state of mind of each person is in some degree affected by the mental processes of all those about him."* This description brings out that the fundamental condition of collective mental life or the Psychological Group is that the members of the Group should *act, feel, and think together*.

But this thinking, feeling and acting together of the Group as a whole are different from the normal thinking, feeling, and acting of the individuals who compose it. Nor are the former a sum or average of the latter. The collective modes of active feeling and thought are frequently on a much lower level than individual modes. They may also be on a higher level. Truth seems to be that "where two or three are grouped together" new forces are at work, "welding the individuals into a new organism." No doubt these forces are latent in the individual minds. But it is the presence of others that brings them into play. They have no meaning apart from their social reference. What then are these Forces?

Social Forces Latent in the Individual

These forces which are latent in individuals but which require the presence of other people to bring them out are the

* THE GROUP MIND—McDOUGALL.

Instincts of *Gregariousness* and the Instincts of *Self-assertion* and *Self-abasement*. These principal factors that produce the Crowd Effect are comprehensively termed '*minesis*'. Under '*minesis*' are involved all forms of *imitation*—of feeling, thought, and action—which constitute the "inevitable triangle of collective consciousness".

Manifestations of Gregarious Instinct

Sympathy, Suggestion, and Imitation, are manifestations of the Gregarious instinct. Sympathy is the power to share the feelings of our fellows. It is a most potent force for welding a number of individuals into a Social Group. Its importance in school life is great. A person who has not this gift of sympathy has no business to become a teacher. He is incapable of understanding his pupils and assume his proper place in the Social Group of the School.

Suggestion

We can not only share the feelings of our fellows but share also their thoughts. This sharing of thoughts is of two kinds, the conscious acceptance of ideas by reasoning and the unwitting process of sharing thoughts which we call *suggestion*. Suggestion is defined by McDougall as "a process of communication resulting in the acceptance with conviction of the communicated proposition in the absence of logically adequate grounds for its acceptance." The peculiarity with Suggestion is that the person receiving the ideas is not quite conscious of the process, though it may be quite deliberate on the part of the person suggesting. The person who receives the ideas thinks that they are his own ideas, never imagining that they come from an outside source. Shakespeare's Iago who while seeming to defend Desdemona is deliberately suggesting evil thoughts of her in the mind of Othello; and the witches in Macbeth, are classical examples of

the incarnation of the power of Suggestion. Suggestion is not, however, a force for evil only. It is equally powerful for good.

Power of Teacher to make Suggestions for Good

Now, the Teacher, being older and occupying a position of authority, has great power to make suggestions to his pupils. The Teacher is a man or woman of high moral character and so is in possession of a power to suggest good to the pupils. But the Teacher is not likely to succeed if he or she does not sincerely believe in the ideas which are attempted to be suggested. The Teacher has the right and the duty deliberately to suggest the "critical truth-seeking habit" and the "ideals sanctioned by the best and widest experience of mankind." A great Teacher is a model to be copied and imitated. He is a leader to be followed. He is an inspiring embodiment of great ideals.

Tone : The Quality of the Group Mind of the School

It is through the example of such Teachers and through the ideals that they embody and through the traditions and conventions of the School that the *atmosphere* or the *Spirit* or the Tone of the School comes into being. There is the mark of the quality of the Group Mind of the Community of Pupils and Teachers of the School. It indicates the nature of the "Organized system of mental or purposive forces," of the "organized and relatively permanent system of physical forces and factors, manifesting itself in such phenomena as memories, ideas, sentiments," etc. This constitutes the atmosphere of the School.

The Foundations of Joyousness

Whatever may be the pillars we select for our Temple of Learning we must lay foundations of Joyousness. "Unless education is Joyousness, it cannot be education. Joyousness

is the acid test of right education. But such foundations can be laid only by joyous teachers." And it will not be possible to reform our educational system until we know how to educate Joyousness in our Teachers. Is it not, however, a little pitiable that most of our training institutions today are "far more intent upon *form* than upon *life*"?

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PSYCHOLOGY AND ART OF EDUCATION

PART VI

RECENT EDUCATIONAL EXPERIMENTS AND PLANS IN FREE INDIA

PSYCHOLOGY AND ART OF EDUCATION

PART VI

RECENT EDUCATIONAL EXPERIMENTS AND PLANS IN FREE INDIA

CHAPTER LVIII

THE INDIAN EDUCATIONAL SITUATION

Educational backwardness of India today

The history of Indian Education is a depressing story. Nevertheless it is refreshing to note that there have been a few significant educational experiments in recent years which may be interpreted as signs of hope on the educational horizon.

We may first try to get a fairly correct synthetic picture of the Indian educational situation in general before we undertake to estimate the relative virtue of these educational experiments. It is unfortunate that so far as the percentage of literacy or the accessories of an organized system of education are concerned, India must be reckoned as one of the most backward of civilized countries, where education, particularly that of the masses, needs special attention and speedy improvement.

Education in Ancient India and during the Moghal Period

In ancient India the ink of the scholar used to be considered as more precious than the blood of the martyr, and some-

thing of the sanctity of religion was attached to education also which was never regarded merely as a means to the earning of a livelihood. Education was then more an integral part of contemporary culture than it is today. Teachers took to it as a labour of love. And students were devoted to it with zeal and industry for the purpose of acquiring culture, scholarship and spiritual upliftment.

And yet in the middle of the twentieth century India lagged so far behind. Why? It is not our concern now to investigate into the chain of causes that led up to this condition, though it may not be out of place to touch upon a few significant facts which are of some general interest. During the period of the great Moghal regime there was certainly a fairly well-developed educational system, which was open to all, though not quite universal, and which was maintained by private philanthropy and by state patronage. But, when the Moghal Empire broke up and a period of chaos and confusion followed, the social and cultural modes and institutions also broke down and the continuity of educational work was seriously damaged.

Inadequacy of Educational facilities during the time of the East India Company and After

And then the East India Company, which gained control of the country gradually, did not care for education and did not even realize that provision for adequate educational opportunity was a necessary function of a civilized government. In spite of the splendid work done by some Christian Missions, the country may be said to be immersed in darkness so far as secular education is concerned. It is significant that the Company sanctioned in 1813 a meagre sum of £7,000 for the education of the entire country and a miserable dole for education during the next forty years. And how could illiteracy be reduced at that rate?

Since then more money has no doubt been spent on education. But the problem is so immense in magnitude that no scrappy programmes could ever produce a perceptible improvement. Nothing short of a radical nation-wide programme involving the harnessing of all possible material and human resources can ever be effective or adequate. But this was never attempted. And so, both the quality and quantity of education in India have been always meagre, inadequate and in some quarters unworthy of a vast nation, which claims for ancestral cultural heritage.

The magnitude of the Indian educational programmes and the poverty of the Indian educational policy during 150 years

The magnitude and importance of the problem of education in India can be realized when we notice that the interests of 400 million human beings, that is one-fifth of the entire human race on earth, are involved. Schools are to be provided for sixty million children, whereas forty-five million children never enter the portals of any kind of school whatever. Out of the sixty million children of school-going age only about four millions acquire proper literacy or receive any useful social or civic training. Be the cause as it may, either the presence of a slow-moving foreign government, or its visionless administrative personnel lacking in proper initiative and desire, or the absence of sufficient persistence and dynamic outlook in a people under prolonged political subjection,—the fact remains that, while other countries have gone ahead under their educational systems, India has been handicapped by the presence of a red-tape-bound bureaucratic administrators of the visionless quill-driving and job-maintaining variety. Whatever the causes, the important thing to note is that, neither vision nor courage nor foresight has characterized the Indian educational policy these one hundred

and fifty years. And today we are reaping the fruits of this long indifference and timidity of outlook.

The shabby and unworthy material provision for education

And now what about the quality of the education imparted? Even on this side the picture is not satisfactory. There are many factors that determine the standard and quality of education in schools. These factors are both material and psychological. The teachers, the curriculum and the methods of teaching, the building, the equipment, the playgrounds and all the physical, social, moral and aesthetic influences at work in the child's environment,—all these constitute the factors that determine the standard and quality of the education of the sons and daughters of the citizens of a country. What really moulds the child's many-sided personality is the total impact of all these factors.

Now, what about the education in India? Above all the variety of factors mentioned above, the financial stringency is the most outstanding, as it is to a great extent responsible for the shabby and unworthy material provision for education. An outsider can hardly imagine the bleak environment in which the half-starving and much-looked-down-upon poor school teachers have to work in the bare mud house with dirty floor and bare walls, sans ventilation, sans washing or eating arrangements, to which children go in the most formative period of their lives and in which the puerile teacher is expected to draw out all the potentialities of those children, physical, intellectual, artistic and moral. We can, to some extent, imagine the plight of the poor teacher and the starving child by noticing what a Director of Education in India who is now an Educational Adviser to a Provincial Government has recently said in his lecture in Australia. "Incredible as it sounds, the total

educational expenditure from public funds in India is approximately equal to the educational expenditure of all kinds in Greater London ", and " the educational expenditure per child is about twelve shillings a year in India, as against an average of about 40 in Great Britain."

Triumphs of the Indian genius over obstacles

There is no wonder then, that with this lack or paucity of financial resources added to a glaring lack of good personnel, India should be so poor, so largely illiterate, and so educationally backward. But the real wonder is that in spite of these hardships India has presented to the world men of such intellectual stature as of Tagore and Iqbal, Bose and Ray, Radhakrishna and Muzumdar, Gandhiji and Pandit Jawaharlal Nehru, a number of poets and philosophers, scientists and artists, statesmen and leaders of humanity. But these *are not* the products of our educational systems. Some of them represent *revolts* against the system. They are a tribute to the Indian genius which triumphs over the hardest of obstacles and the heaviest of odds.

Culture and literacy are different things

Another important thing that we should note is that culture is not the same thing as education or literacy. The finest fruits of a really good education and culture are honest work, decent dealings, the knack of respecting other people's feeling, kindness and grace, self-respect and strength of character. In our Indian village there are millions of persons with these virtues side by side with persons wallowing in squalor and pitiful illiteracy. Some of them have inherited these virtues from hoary ancestry and some have acquired them in the never-failing school of life. There is, however, a great chance of people fumbling in mental darkness and obscurantism if educational opportunities are denied to them. In view of the new social order which is yet to emerge in India we cannot

afford to remain contented either with natural or inherited qualities of character or with the list of the fine thinkers, scientists and statesmen who were *born* in our country, which did not, however, *produce* them. The real worth of a civilization and social order will be measured not by the length of the list of the names of these men and women of special genius and outstanding ability and culture. It will have to be measured only by the standard of intelligence, personality, and moral and social worth achieved by the *general mass of the people*, and by *humility* and sense of public *service* of the top men in the country.

Educational degeneracy of the masses and the seeds of the decay of the State

Those responsible for the Educational administration of our country should never be deluded by the fact of the presence of the few individuals or small privileged groups in our country who enjoy the amenities of culture and material comforts; for the glaring fact always stares us in the face that the majority of the people of this unfortunate land have long been steeped in ignorance, disease and poverty. They have the least opportunity to appreciate and enjoy the riches of the mind and the splendours of the spirit. Such a state of affairs is not only unfair socially but also morally. And what is more serious is that such a state of educational degeneracy harbours the seeds of a wholesale decay of the State within its own bosom, leading to the loss of its honour among the states of the world and even to its ultimate extinction as a free country, for it is the elite that constitute the state and their enlightenment and happiness that bring honour to the state.

What kind of education school children should have in Free India

So it is that social justice as well as the welfare of the elite demands a proper and careful reorganization of our

Social and Educational system. The main object of such a reorganization should be *the raising of the general standard of living and thinking*, the contributing to the culture and refinement of the people *at large*. What should be patiently and persistently aimed at is not merely the establishment of some system of schooling that is within the reach of every child in this land, but *creating an outlook and an organization* that can really enrich the mental food provided for the child in the ordinary public elementary schools. The department of education and its presiding ministry cannot afford to continue to think as in the dark days of foreign rule, that a moribund curriculum centering on the three R's is the be-all and end-all of their vociferous and vain-glorious official paraphernalia and mid-day office-room activity. They should no longer think that for the child of this Free Country the old dry-as-dust school-drill in the three R's is enough, that schools need not have the healthy contact with the rich pulsating currents of life, that the wider cultural amenities may well be dispensed with as useless or unnecessary, that arts and crafts may all be simply brushed aside as an encumbrance for the teacher and as a nuisance that involves multiplication of official correspondence and red-tape appurtenances. This kind of bureaucratic, office-ridden, class-dominated and caste-ridden conception of education should be broken down, and equality of opportunity to receive life-nourishing and mind-developing education should be sought to be established for all boys and girls irrespective of caste, creed or class.

His Excellency Sri Rajaji's Advice

His Excellency Sri C. Rajagopalachari, the first Governor-General of the Indian Union, in his recent speech in Madras eulogised in his characteristic simplicity on the *gospel of equality* in the following deathless words:—
“We, the Government and the people, are unchangeably pledged to treating all people alike; not only our Government,

but the *Dharma* of our people also commits them to this attitude of *perfect equality* irrespective of caste or creed. I want to make this your practical mode of thinking and acting. According to the taste and requirements of the several groups of people several different institutions will have to be raised and they are all Indian.....They are my children, I once again tell you. May God bless them all!"

In concluding this short note on the educational situation in India, with reference particularly to primary education, we can do no better than to quote these telling words which Sri Rajaji told recently the graduates of the Madras University.

"The task of teaching children how to read and write and calculate is important, but it should not make us lose sight of the primary aim of moulding personality in the right way."

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CHAPTER LIX
**SOME RECENT EDUCATIONAL EXPERIMENTS
IN INDIA**

**SANTINIKETAN, JAMIA AND JATHEEYA
KALA SALA**

The problem of Secondary and Higher Education

The statement regarding the educational situation in India, which has been given in the previous chapter, is mainly with reference to primary education. Primary Education is the biggest and naughtiest of our problems. Though Secondary and Higher Education affect the lives and careers of a comparatively small fraction of the people, it also is a problem of considerable importance. It has, however, received better attention at the hands of the persons concerned, though, on the whole, it has to be said that here too we find the domination of the same theoretical, unrealistic and bookish bias as we find in the field of Primary Education. But this fact has already been realized by some distinguished educationists and some experiments have already been carried out in recent years implementing the New Outlook in Education and directing the enlargement of the scope and enriching the content of education. We shall now review briefly a few of these significant educational experiments which, having for their object the improvement of the quality and standard of education, may be taken as the green signs of hope in the Indian educational field.

RABINDRANATH'S SANTINIKETAN

Freedom from red-tape mechanism

All of us have heard of the poet, artist, and cultural ambassador of International fame, Rabindranath Tagore. His institution, Santiniketan of Bolpur, located at a place

hallowed by the spiritual meditations of Maharshi Devendranath Tagore, represents a reaction against the dry, narrow and soulless education which the state provides. That state-provided education, cut off from the springs of the people's life and culture, is merely a means of training clerks and junior administrative officers for government service. A narrow curriculum deriving both its content and inspiration from foreign sources and relying on the medium of a foreign language could not possibly provide the right type of social, moral and aesthetic education. It is much too formal and stereotyped and rigidly governed by rules and regulations and red-tape mechanism.

Education in an atmosphere of freedom

Tagore was a great literary genius and combined in himself the manifold values of culture. He knew the defects of the education he was having when he was a boy and ran away from his school. Later, for the good of other children in his land, he established his new institution, not bound by the curricula and regulations of the government department of education. Instruction in his school was imparted in an atmosphere of freedom where children were not fed on foreign undigested materials, but nourished on the rich resources of Indian arts and literature, and of Indian life and ways of living.

Rapprochement between education and folk culture

Tagore thus brought a rapprochement between education and folk culture. He was the first Indian educationist in modern times who utilised the educational resources of indigenous art, literature and culture, which the government department, presided over by some indifferent and unworthy foreign exploiters, tended to ignore altogether. In addition to this, Santiniketan afforded opportunities to students for doing Social Work and Community Service in their

locality and their villages. Thus Tagore helped to alter somewhat the unrealistic and theoretical complexion of tape-bound education.

But it should not be supposed that Santiniketan education, while being essentially Indian in genius and inspiration, is therefore narrow in scope and comprehension. That is not the case. On the other hand, its outlook is *modern* and *international*. Herein lies the glory of Santiniketan, essentially Indian in *inspiration* and yet modern and international in *outlook*. Tagore's personality attracted several distinguished scholars from Asia, America and Europe to Santiniketan, which thus acquired something of the status of an International University and formed the nucleus of the world-known Visva Bharathi. Thus Tagore demonstrated that India is not merely to 'take' but has also much to 'give'. This is what helped to give the Indian educationists after several decades a new confidence unknown before. Hence the importance of the Santiniketan experiment of that great Son of Universal Culture and Ambassador of Peace and Understanding between the nations of the world!

THE JAMIA OF DELHI AND THE ANDHRA JATHEEYA KALA SALA

The National Muslim University

Another educational experiment which is significant is the National Muslim University at Delhi known as the Jamia, which celebrated its Silver Jubilee in 1946. This is also a fruit of private enterprise, which consistently refused to accept government grant-in-aid and recognition. Thus the Jamia is free from government guidance and supervision or interference. A new ideology and a new outlook characterise this institution and the Jatheeya Kala Sala of Masulipatam (Andhra) which are formed with the idea of educating youth, not for government services, but for public work.

social service, business and other independent walks of life. Thus released from government interference the Jamia developed its own methods and curricula.

Jatheeya Kala Sala

The first step which the Jamia took was to adopt Urdu or Hindustani as the medium of instruction. It worked like the Jatheeya Kala Sala on the realisation that the creative capacity of a people cannot be released unless its children and its youth are educated through a language ' that is woven into the very fabric of their being because they drink it, as it were, with their mother's milk ! '

The Activity Movement

In the second place, these two institutions took the lead in initiating what is called the " Activity Movement " in Indian education. They tried to inculcate in their students a broadly national as well as humanistic outlook through their teaching, their extra-curricular activities, their general social life and atmosphere, and above all, through the personal example of a fine set of teachers and great organisers like Dr. Zakir Hussain, Dr. Pattabhi Seetharamayya and late Sri M. Hanumanatha Rao.

Hindu Muslim Cultural Harmony

In this connection one point however needs special mention. The success of the great educational experiment of the Jamia is due primarily to the personality, the vision and idealism of its head, Dr. Zakir Hussain, whose great ambition has been to form a bridge and a link between the best elements of Hindu and Muslim cultures. It has been to make the Hindus appreciate the value of Muslim ideology and to persuade the Muslims to play their part worthily in the cultural life of the great land of their birth. At a time when separatist movements and political and cultural intolerance are gaining

ground rapidly in India as in other countries, such great experiments in spite of their distressing financial disabilities, acquire a special significance on account of this valuable teaching of the gospel of *broadminded toleration*, of *cultural fusion* and '*rapprochement*', " of recognising differences but interpreting them as means of enrichment rather than reasons for conflicts, of individuality nurtured in a social context, of respect for patterns of community-cultures set in the larger framework of *national life*" and *international understanding*.

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CHAPTER LX

ADYAR EDUCATIONAL INSTITUTIONS:

FREEDOM AND BEAUTY IN EDUCATION

Dr. Arundale's Scheme of "Real Education"

The Scheme of Education which is intended to be embodied in the Adyar twin institutions, the Besant Theosophical School and Srimathi Rukmani Devi's Kalakshetra, is claimed to be something like an ideal scheme, a scheme of "Real Education" as is described by the Rishi of Adyar, the Ex-President of the Theosophical Society and a veteran educationist of Benares fame, a great friend and champion of Indian culture, the late revered Dr. G. S. Arundale. This is what that beloved President and revered friend of India said :—

"The Besant Theosophical School must do its own very important work of trying to improve out of all knowledge the existing system of education, but must still keep its activities within the understanding of the better type of parent. On the other hand, Kalakshetra, the International Art Centre, might very well, under the guidance of Rukmini Devi, help to experiment in an educational scheme which should be truly scientific in the inner Theosophical sense of the word."

Training in Rhythmic Living

The first purpose in this scheme of 'real education' is recognised to be to help the child to live rhythmically and gracefully in the veriest detail of his living, to bring out in the child the three heavenly characteristics of *rhythm*, *grace* and *poise* and to help him to express these in *daily living*.

Evolution from Simplicity to Sublimity

Secondly, in 'real education' evolution should be from simplicity from the very earliest years of the child. Thirdly,

in this scheme of education the *unfoldment of each sense* is of vital and prime importance, as the senses are the windows through which the soul looks upon the outer world. Fourthly, as *self-discipline* is the essential foundation of effective living, proper environment is sought to be given to the child so that he may acquire good manners, cleanliness and punctuality, and have good health, food and rest, and cultivate refined feelings and emotions. The proper way of assessing such an education is in terms of human *happiness* and *contentment* rather than by the marks obtained by the children in the examinations and the size of the salaries earned by past students.

Foundations of Joyousness

Another important point envisaged in this scheme is the need for laying the foundations of joyousness. Generations of pupils are indebted to their parent-Rishi of Adyar Dr. Arundale, for these two sentences he has written in his little book "Theosophical Education". "*Unless education is joyous, it cannot be education. Joyousness is the acid test of right education.*"

No dreamer of ideal education can omit insistence on the creative aspect of child's development. So it is that we find in the Adyar scheme provision for the exercise of the creative spirit, and a positive *responsiveness* to sounds, to colours, to forms, and no less to *friendliness* and *sympathy* with all living beings.

Among the educational experiments embodying the best in our national tradition adapted to the present-day requirements, we give a very high place of honour to Mahasayo Dr. Rabindranath Tagore's Shantiniketan. And I believe that an equally important place should be given to the *ADYAR* experiment in education.

THE BESANT THEOSOPHICAL SCHOOL

The Tradition of the Ancient Forest Schools of India

With regard to both Tagore's School and Adyar Institutions it may be said that they keep to the tradition of the forest colonies of great teachers, which were not schools or monasteries in the modern sense, but were homes, where with their families lived men whose object was to bring up students not on the mere academic lines, but in an atmosphere of spiritual aspiration.

Residential and Co-educational Institutions

In the Adyar institutions the day's work begins with prayers and chanting in the shade of the trees of the Besant and Damodar gardens. And then begin the class lessons. But there is a great freedom in the matter of the time-table. The children may choose to attend the classes, or spend their time in the library or sit on the trees, or if the lure of nature tempts them may even decide on going for an excursion, where they may study Nature directly and enter into the joy of Nature's beauty. In this educational colony the daughters of the teachers and the residents of Adyar are there from the very inception. The girls and boys from Ceylon in the south, Bombay in the west, Bengal and Delhi in the north are all well looked after by lady superintendents and teachers, so that the schools combine the advantage of both residential and co-educational institutions. This gives the atmosphere an inevitable *aesthetic touch*.

The Scholarship of the Besant School, the Music and Dance of Kalakshetra and the warbling of the birds in the *sapota* and *marigo* groves combine so beautifully that the enchantment of the whole situation is such that the place is *an ideal setting for the evolution of young souls*.

Histrionic Talents

On account of periodic opportunities for dancing and acting in the presence of Governors and Viceroys, the teachers and pupils get ample scope for the exercise of their histrionic talents without anything like stage fear or nervousness. For such opportunities like these the Adyar educational colony deserves to hold a unique place in India for ever as in the case of Shantiniketan of Bolpur.

It should not, however, be supposed that life in Besant and Damodar gardens is all singing and dancing and nothing more. It has its serious side of study, discipline and character building. The teachers live with their pupils pursuing their own study and helping the pupils in their lessons and in preparing for their arduous public examinations. This New Education requires teachers with new vision and with new enthusiasm. But where are such teachers? And yet "*how much* superior is such education to that given in the ordinary schools, where the unwilling student is crammed daily with more or less unrelated facts, dead to him, however interesting in themselves, for he cannot assimilate them to any vital necessities of his being, and so the student sinks into dull apathy, or is goaded by punishment into hypocrisy.

RUKMINI DEVI'S KALAKSHETRA

Rishi Arundale told us that the first object of his "real" scheme of education is to help the child to *live rhythmically and gracefully*. Music is obviously of vital importance in this scheme of education. The little child must from the very beginning hear beautiful music. Next he should appreciate it and be moved by it. And then he must discover his own music in himself. And lastly, he should feel moved to sing his own song. To take the child through these stages is no easy matter. It requires the inspiration of the presence and example of some one with the very soul of music in him or her.

And then Dancing is no less an essential part of a real scheme of education. Srimati Rukmini Arundale, the Inaugurator and Director of that unique International Art Centre that stands at the confluence of the Bay of Bengal and the picturesque Adyar river,—knows through her awakened intuition what is the nature of a wakening Music and inspiring Dancing in all their aspects and what part they should play in a “real” scheme of education. She knows how through Music, through Dancing, through singing, through movements of all kinds, through drawing and through painting, the human being may be helped to become lissom, balanced, throbbing to increasing purpose and design. All these movements of Art and Art-creation may be manipulated for realizing the end of the ennoblement of character and of the development of the great virtues of living.

Srimati Rukmini Devi founded Kalakshetra in 1935 and her ardent hope is that the centre may help to revive throughout India the true spirit of the Arts, so that India's re-awakened freedom may become true and beautiful through “the re-birth in every Indian home of the age-old Indian Culture.” It is also her hope that this centre may be a means by which the best of the cultures of the East and of the West may be drawn together, for “culture which is beauty, is above all distinctions of race, nation and of faith.”

Srimati Rukmini Devi's special art subject for teaching her pupils is Bharata Natya, the dance which is known as such in Southern India, though it is based on Sanskrit books known throughout India. A feature of this excellent Indian artist of international reputation is that the items of her attractive programmes are in strict *conformity with tradition*. This adherence to tradition is a matter of immense value because it helps the spectators to contact Indian culture as it is, rather than as it seems to be to hasty interpreters.

Possibilities for Unlimited Individual Expression

Another feature of the art of which Rukmini Devi is an ardent and expert exponent is, that, within the limits of traditional bounds, she finds scope for her genius, her original creative imagination, to work out its way to the hearts of her art-spectators. Thus she demonstrates that Bhaṛata Natya is not a static wooden framework of human movement without any scope for creative growth, but is an exquisite art with ample possibilities for unlimited individual expression and infinite scope for growth and development on the lines prescribed by the great sages of the past.

It is not our object now to give an account of the particular art in which Srimati Rukmini Devi is the expert teacher. Our purpose is only to show an example of an institution which is devoted to the teaching of Fine Arts and yet which can co-operate with institutions of other kind embodying the general scheme for the cultural and intellectual equipment of the boys and girls of our land.

The Value of Beauty

Of the three ultimate values of life, Truth, Beauty and Goodness, Education both in the West and in the East has taken account only of Truth and Goodness these centuries and has shown indifference, if not apathy for the ideal of Beauty. But the liberating force of the aesthetic spirit is just now enabling Beauty to vindicate again its place in this trinity of Absolute Values. We are just now realizing that Beauty of form, colour and movement can inspire the inner Beauty of Life which is the true aim of education. And here in India it is the great mission, the noble objectives of the life and work of a cultural ambassador like the poet Rabindranath Mahasaya of Bolpur Shantiniketan or the artist Rukmini Devi of Adyar Kalakshetra.

Beauty is the prime motive of all excellence. As Robert Bridges said, " Verily by Beauty it is that we come at wisdom,

and Beauty is the external spouse of the wisdom of God." If this is so, if by the rich experience of the ages it may be seen that by Beauty we have to come at wisdom, then we cannot rest indeed until Beauty is given equal value with Truth and Goodness or Love in the schemes of the education of mankind.

ARUNDALE-MONTESSORI TRAINING CENTRE

A Movement for the Freedom of the Child and the Education of the Human Potential

The Triple Scheme of Experimentation in Adyar Colony

We have briefly surveyed in the last chapter the objectives and the outlook that are implied in the Adyar educational experiments i.e., the Besant Theosophical School and the Kalakshetra. And now there has recently been the confluence of a third stream of educational experimentation enriching the cultural fruitage of the Adyar educational colony. This has been brought from Italy into India by Dr. Maria Montessori, one of the ablest champions of Child Education in our country.

Dr. Maria Montessori has made India her home and made Adyar as the fitting centre of her recent educational activities with the support and co-operation of Srimati Rukmini Arundale. Her unique international institution is called the Arundale-Montessori Training Centre; and it has been the instrument for training several batches of teachers in the method of teaching children which has been popularly known as the Montessori Method.⁹

The Montessori Method

The Montessori Method is essentially an Individual Method. It is the result of an endeavour to devise a way by which the creative energies of children at school may be set free and thus make children themselves their own educators. The pioneer

in this endeavour, Dr. Maria Montessori, is an Italian doctor born in 1874. She began her educational career with the training of mentally defective children. Her success with these children led her to ask whether the same methods she used would not give better results with normal children. In the course of her investigations she hit upon two of the fundamental ideas of her system. (1) That education must always be an individual business, (2) That the individual development is best directed by means of a graded series of educational apparatus.

Her practice justified the extension of her methods to normal children, and her system developed gradually. It became evident that the methods which enabled the feeble-minded children to be educated were able to call out the initiative of the normal children also to educate themselves. Thus Dr. Montessori came upon two more principles. (1) That all education should be self-education. (2) That the children should be allowed the freedom necessary for this self-education by the substitution of an impersonal sympathetic teacher for the ordinary old-fashioned stereotyped teacher with feelings of superiority and authority.

The Didactic Material

The ideas of this world-known educationist materialised themselves in the "didactic material" which she later preferred to call the "development material". She made a beginning of systematic education with the Training of the Senses. For this purpose she invented and adapted twenty-six pieces of apparatus which she applied successively for the improvement of the different senses and which I believe she still recommends for use to her teacher-pupils at the Arundale-Montessori Centre at Adyar to-day. In this way the little ones learn to distinguish different degrees of rough and smooth, hot and cold, large and small, and become able to match colours and fit in sets into their proper places.

Self-Education

And then, at the completion of sense-training, comes the second stage in which the learners turn to writing, reading and counting. Much on account of the valuable preparatory sense-training, the course of *self-education* runs easily. There is a sudden discovery of power to write. Dr. Montessori tells us in her book, *The Secret of Childhood*: "One day a child began to write. He was so astonished that he shouted aloud, 'I've written! I've written!' The other children also shouted, 'I too! I too!' and ran off and filled walls and doors and loaves of bread at home with writing. Thus written language began to develop as an *explosion*. It was like a torrent. And reading likewise came after. It seemed that written language was understood by children merely as another way of expressing themselves, another spoken language meant in the same way to be transmitted directly from one person to another." At the third stage, reached in the elementary school period up to eleven, the children are provided with fresh apparatus, by which they are enabled to learn such subjects as arithmetic, grammar and geometry.

Individual education : the Liberation of the Child

Dr. Montessori's most valuable contribution to educational progress is the idea of *individual education*, guided by carefully planned material which has been graded in accordance with school-room experiment and experience. An educationist of the university of Glasgow while acknowledging the above mentioned valuable contribution of Dr. Montessori to educational progress, proceeded to mention a few limitations of her system. He says, her system "ignores the play activities of children." He says further:—"It takes little account of the interplay of individual and group. It seems to have no place for the personal influence on which the spiritual development of the young depends." But, we believe that even a cursory reading of Dr. Montessori's books like "The Child", "The

Secret of Childhood”, and “To Educate the Human Potential”, will show that neither the play activities of children nor the factor of interplay of the individual and group is ever lost sight of in her scheme of education. There can be no doubt that by both her special technique of child training and instruction and her unique outlook and sympathy and understanding of child nature, Dr. Montessori has done an ever-lasting service to the cause of the *liberation of the child* and brought about a most stimulating effect both directly and indirectly over the whole field of education.

The Key to all Pedagogy

Dr. Montessori claims to have discovered the key to all pedagogy which is to know, to recognize, the *precious instinct of concentration* in order to make use of it in the teaching of reading, writing and counting, and, later on of grammar, arithmetic, foreign languages, sciences etc. As every psychologist knows, there is only one way of teaching, i.e., that of arousing in the pupil the deepest *interest* and at the same time a constant and vivacious *attention*. So then education finally comes to mean the *making use of those intimate and hidden forces of the child*.

Building suitable Environment and filling it with Instructive and Attractive Objects

It is for this purpose of stimulating and sustaining the concentration of the child's mind by the stimulation of these hidden forces of the child that Dr. Montessori takes so much care to build suitable and interesting *environment* and fill it with objects like pictures and cubes, colours and sounds, that are at once attractive and instructive likewise.

It is the belief of this great pioneer of child emancipation that the root cause of the present ills of the human race is to be found in the faulty education given to the children all the world over, and that therefore the remedy for these ills and

the means for the regeneration of human society is in the proper and speedy re-orientation of child guidance, child education and child emancipation. Such a re-orientation of the human mind from its earliest stages will pave the way to the *emergence of a new humanity and a new adjustment* of the individual to the community, and of the state to a new world order. This is the method, the strategy, of Dr. Montessori in the crusade for peace.

Re-orientation of Fundamental Values

Dr. Montessori sees modern education as distinctly separative in tendency. She declares that "the very disunity that one finds among nations grows out of the disunities fostered by the educational system of to-day." But Dr. Montessori is not a mere destructive critic without any constructive programme to offer. This great and illustrious educationist is "reorienting education to new and fundamental values: the kingship of the individual and his oneness in a great brotherhood of all life."

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CHAPTER LXI

A RECENT COMPREHENSIVE EDUCATIONAL PLAN FOR FREE INDIA :

THE SARGENT SCHEME

In the post-war scheme of educational development in India, the Sargent Scheme has great significance. Sir John Sargent, the Educational Adviser to the Government of India, was largely responsible for piloting it through varied and trying stages of committees and conferences. An official attempt was made to face the problem of Indian Education for the first time in the history of British India. The Scheme made an honest attempt to answer the question seriously, the question as to whether education in India should continue to go in the slow, slipshod and cursory manner as it has gone along for over one and a half centuries or should an earnest attempt be made to lift India to an honoured place among the civilized countries of the world by providing her people sufficient educational facilities.

A very comprehensive survey of the educational problem

The first great merit of this scheme is in the fact that this is the only comprehensive attempt to survey the problem of Indian Education. Its survey comprehends the Nursery School on one side and the University on the other. And it does not omit to work out its financial and administrative implications.

A second merit of this scheme lies in the fact that it is a challenge to those who have the true welfare of India at heart. So far educational reform had been only a superficial addition to, or subtraction from, the number of subjects in the curriculum, or starting a school here or opening a college there.

And no large-scale measure like the introduction of free and compulsory education was ever considered as within the scope of practical politics. But now the Sargent Scheme affirms that the only way to save India from ignorance and illiteracy is the implementing of its various proposals regarding the schools, colleges and technical institutions. This is a gigantic scheme involving a large variety of recommendations.

Recommendations of the Scheme

The following are the recommendations which form the basis of the scheme. The scheme proposes to provide the following items of educational reconstruction :—

(1) Pre-primary education on a voluntary basis for above one million children, in the first instance, between the ages of 3 and 6.

(2) Universal, free and compulsory Basic Education for nearly 36 million children between the ages of 6 and 14.

(3) A suitable system of High School Education, imparted in academic as well as Technical High Schools for over 7 million pupils.

(4) University education for about 240 thousand students.

(5) Technical, Commercial and Art Education for 75 thousand students.

(6) A nation-wide network of different kinds of Adult Education Centres to make over 90 million adults literate.

In addition to the above proposals the Advisory Board made several other important recommendations regarding the training and prospects of Teachers, the education of the Defective Children, the provision of School Medical Services, Recreational Facilities, Youth movements, Employment Bureaux and efficient Administrative System. As the training of teachers, construction of buildings and the organization of

other facilities take time, the authors of the scheme suggest a period of not more than 40 years for implementing the entire scheme of a full-fledged National Education.

The Time Factor criticised

This *time factor* has come in for much criticism, some timid and unimaginative humdrum sort of people supposing that, as the expense will increase the educational budget sixteen-fold, the scheme is therefore beyond India's financial resources, while others, the radicals, condemn the scheme as too slow and inadequate. But we have no doubt that the speed has to be accelerated.

An Attempt to secure Equality of Opportunity

An important and vital feature of the Sargent scheme is that it represents an attempt at securing *equality of opportunity* in the field of education. In this respect India has lagged far behind the other countries. It is a sad state of affairs that a vast majority of the children of the motherland have no educational opportunities of any kind. It has been said truly that this is a *Century of the Common Man*, and no social, cultural or political movement deserves our support "unless it aims at removing the deprivations and disabilities under which the common man has been suffering for ages—unless, in other words, it is inspired by a passion for social justice." The Sargent Scheme is indeed a welcome step forward on the road to the goal of *Social Justice*.

The Scheme is said to be the *biggest educational plan* ever planned anywhere. As Mr. Dongerkery* of the Bombay University says, this plan is more comprehensive even than that of the Soviet Union, and is determined to educate

* Mr. Dongerkery is the Registrar of the Bombay University and the author of a book on University Education.

as early as possible bulks of Indian Children. (1) It emphasises the need for at least eight years' Basic Education to prevent lapse into illiteracy and consequent waste of effort and money. (2) It emphasises the need for Learning by Doing, and the teaching and practice of simple Crafts. (3) The Polytechnisation of Education will at a later stage prevent the present tendency to choose "black-coated" professions and will be of great importance in the coming industrialization of India. (4) And it will also help in the abolition of social distinctions.

A Grand means for a Far-Reaching Socio-Economic National Reconstruction

The special importance of the Sargent Scheme does not, however, lie in the magnitude of its dimension. It lies in the fact that it implies the demand for a far-reaching social, political and economic reconstruction of national life. Being an attempt to educate 400 million human beings on the fruitful lines of Basic Education, if it is properly followed up through its well-designed stages of Secondary, Higher and Technical Education, the Scheme is bound to have far-reaching effects on the Indian Social Economy and even on the World Situation as a whole.

There has been so much talk in Free India today of rapid industrialization of the country. But this cannot be done in a vacuum. It must first be seen through a steady and continued technical education in the country, that a highly skilled technical personnel is secured and is made available for the service of the country. This will make possible a marked increase in the national wealth of the country. In this way we will be able to finance ambitious schemes of Social Services and at the same time fill the country with happier, healthier, more reasonable, more balanced, more social and enlightened men and women. The education of a nation that has just

seen the morning glory of the sun-rise of Freedom is a growing process. It is a process of flooding the country with enlightenment. It is a process of filling the country with men and women of the right type, men and women of healthy bodies and healthy balanced minds with steady vision and moving enthusiasm for the chastening of humanity.

The chances of implementing this scheme

All that is said above about the great Sargent Scheme is well and good. But the question we have to answer now is regarding its practicality. What are the chances of implementing this scheme? It can be put into effect only by a strong popular and representative national government. In spite of the best attention of the present government being taken up by the food and cloth problem of the people, there is every reason to hope that education will very soon be given a high priority in its programme of national planning. The question of finances is always there to cause worry and anxiety. But we have men enough not to allow this consideration to shelve this scheme of educational reconstruction.

We are quite confident that the Government directed by the noblest Son of India, the Hon. Pundit Nehru, the heir of the heart and the successor of the soul of Mahatma Gandhi, the Father of the Nation, will not act on the assumption that India will not be able to achieve what other countries have achieved. Within a period of forty years the United States of America could increase the percentage of literacy from 2 to 55. Within twenty years the United States of Soviet Russia could raise the literacy of its backward, widely scattered heterogeneous population from 22 to 92 per cent. Similarly China and Turkey, in spite of the heaviest of odds, could tackle this problem with creditable success. Why should this great land of Bharatha Varsha alone be unable to do this?

Obviously there have all along been a chain of causes in the past that stood in the way of rapid spread of education in India. We are not, however, interested in narrating the doleful story of the causes for India's astounding illiteracy in the past. We are no longer a slave people today. That is one great point. But then there are other conditions which must be fulfilled for a successful carrying out of large-scale nation-wide educational schemes like the Sargent Scheme which we have reviewed now. What may be those conditions?

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CHAPTER LXII

THE BASIC NATIONAL EDUCATION

A new Chapter in National Regeneration and International understanding and peace

One of the most significant developments which holds out great promise for the future is that which owes its inspiration to the genius and initiative of Mahatma Gandhi. The scheme of Basic National Education was drawn up by Zakir Hussain Committee.

The Origin of the scheme of Basic National Education

In 1937 Mahatma Gandhi wrote a series of articles in his weekly paper, 'Harijan', discussing critically the Indian Education. Gandhiji's main theme was that education was out of tune with the masses and did not take into account the needs and problems of the masses, that the school was mainly a place of book-learning and it therefore failed to train pupils for the demands of an active, social and practical life. By receiving stereotyped instruction in the three R's the village boy does not become a better farmer, a better craftsman or a better citizen, as his education has no touch with the concrete problems of life.

A revolutionary idea

Mahatma Gandhi presented a revolutionary idea which created a flutter in the academic dovecots. His idea is that all primary education must be centered on some kind of Craft Work and that every item of knowledge that is imparted to the child must be closely related to the Basic Craft chosen. He went even to the length of suggesting that no knowledge that cannot be correlated to the Basic Craft need be thought of. These ideas were first discussed at a conference of educationists and later entrusted for detailed consideration and

proper formulation to a committee of which Dr. Zakir Hussain was the chairman. These general rudimentary ideas were then translated into educational terms. A draft curriculum on the correlated plan was prepared.

The meaning of “ Basic ” and “ National ”

This kind of education contemplated by the scheme is called Basic Education because it aims at giving to all children in India “ the basic or fundamental knowledge and skills without which no one could live efficiently or happily in the complicated world today ”. This education is also called National Education because, for the first time in the modern period, it is to be given “ *a nation-wide scope* ”, without being confined to children of any particular locality, belonging to any particular caste, creed or sex or social and economic status. It is called National for some other reason also. It is called National in the sense that its ideology is indigenous and not borrowed ; and it is not a mere blind copying of any western ideology.

The objectives of the scheme

The objectives of this scheme are modest, but are at the same time far-reaching in their implications. These objectives may be brought under the following four different heads.

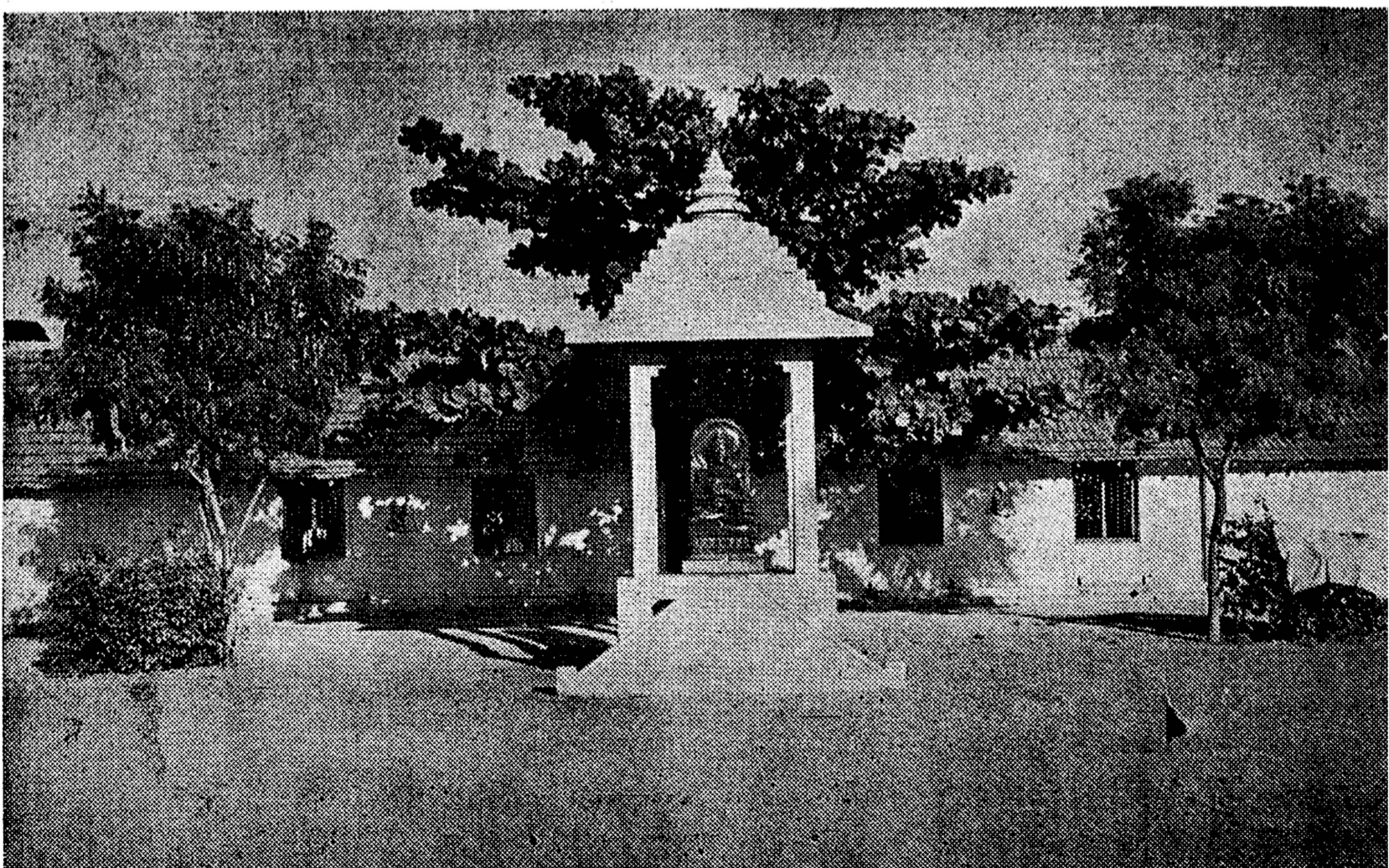
- (1) Education is to be *compulsory*, *free* and *universal*.
- (2) The scheme postulates that compulsory education must be provided for a period of at least *seven* years.
- (3) Education must be imparted through the *Mother-tongue*.
- (4) It must be related to the *basic interest* of the child mind and the *basic occupation* of community life.



A beauty spot—entrance to Rama Krishna Vidyalaya
Basic Education Centre—Periyanaikanpalayam.

(By courtesy of
the Hon'ble Sri
Avanashilingam
Chettiar)

An art corner—Vidyalaya,
Statue of Gautama Buddha.

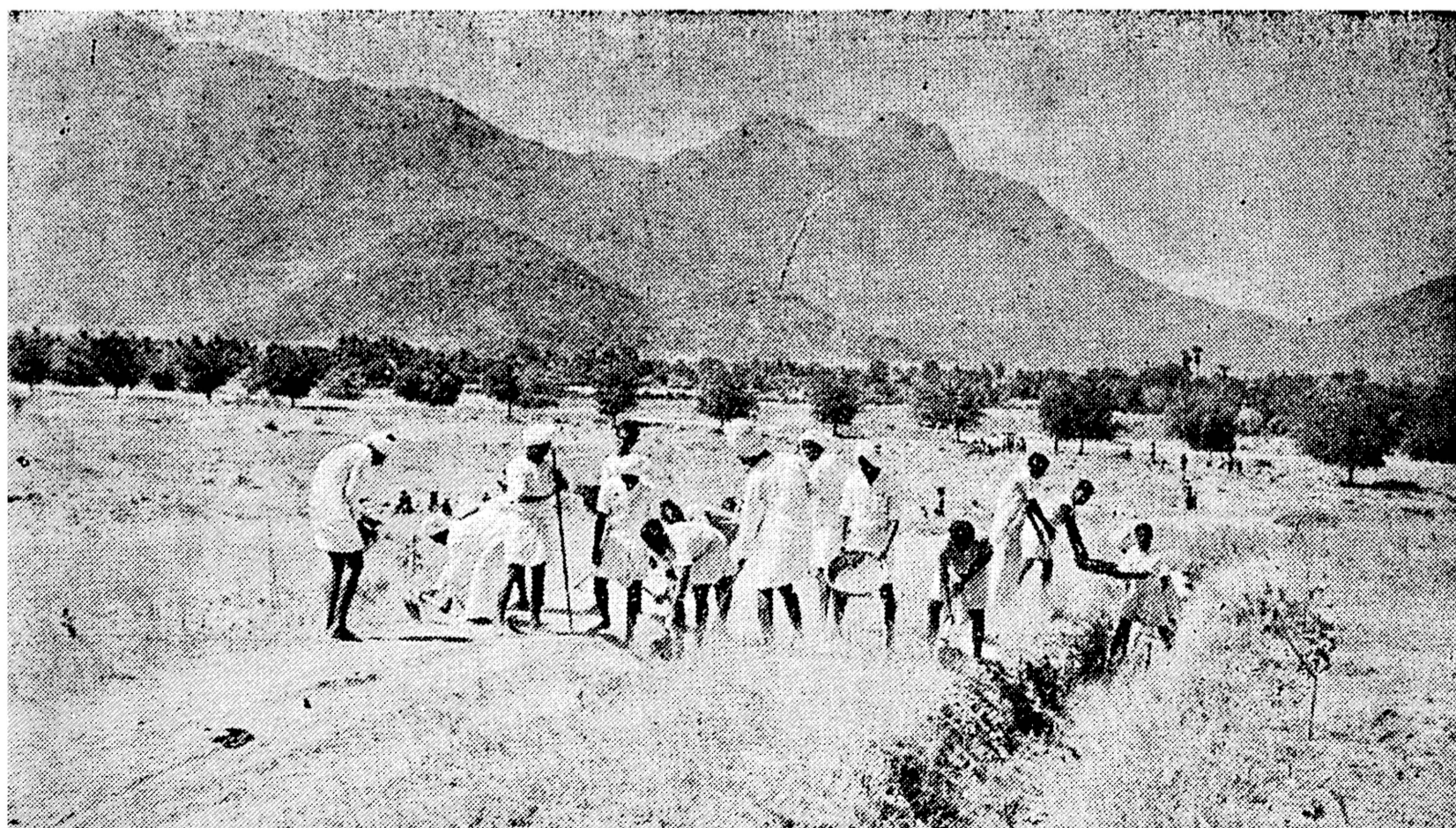




R. K. Basic School pupils
tending Cotton plants.

(By courtesy of
the Hon'ble Sri
Avanashilingam
Chettiar)

Basic School pupils clearing the path
to the school estate.



We shall now proceed to consider the rationale of each of these four objectives separately so that we may realize the significance and importance of these objectives:—

Compulsory and free education for seven years

The importance of the idea of *compulsory*, *free* and *universal* education is something which the most civilized countries have realized. The battle for the introduction of compulsory education has been going on in India since 1911. No doubt in theory the battle has been won after all these dreary decades, but it is still a long way off from being an accomplished fact. How can any social, economic or healthy political reconstruction ever be possible in a country where only thirty-three per cent of the children of school-going age have the chance of stepping on the threshold of a school and only seven percent of them actually manage to reach the Fourth Standard.

The opponents of compulsion point out the economic disabilities of India to finance a scheme of compulsory education. But if the tremendous waste of talent in the country is to be prevented, and the dearth of adequately trained personnel for a thousand and one things that the life of Free India immediately needs is to be removed, the only way is to launch at any cost a generously conceived and adequately planned education. Though it may sound paradoxical it is nevertheless true that the poorer a country is, the greater is the need for large-scale educational ventures. If educational and cultural activities are not less important than wars and bombs, funds will have to be found in a potentially rich country like India, so that a progressive and enlightened national government may soon adopt a many-sided programme of national planning and industrial and economic reconstruction.

Regarding the period postulated by the scheme for compulsory education, namely the period of *seven years* from the age

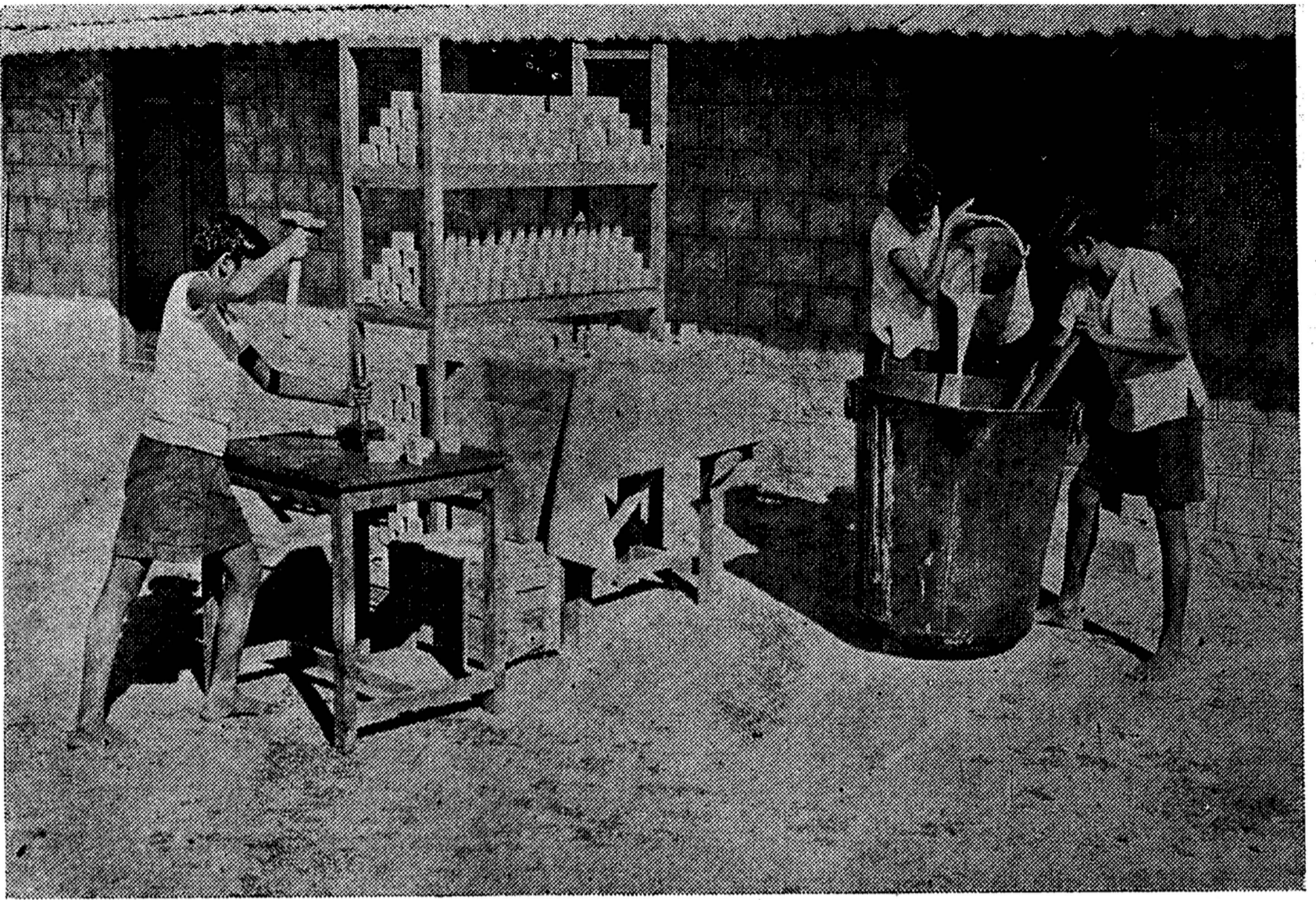
of seven to that of fourteen, it may be said at once that it is too modest an objective. But when we consider that in our country the period of primary schooling is four years only, this should appear indeed as a step in advance under the present circumstances. It is a blessed thing indeed to be assured that every boy and girl of Free India has a schooling for at least seven years.

Mother-tongue

Regarding the *medium of instruction*, it is such an obvious and reasonable demand that it is not necessary to restate this self-evident truth of the Mother-tongue being the best medium of instruction, in spite of the fact that, in some places like the Madras province the issue has been unnecessarily much complicated by confusion between Mother-tongue and Regional Languages.

Basic Interests and Basic occupations

Regarding the fourth objective of *relating education to the basic interests* of the child mind and the *basic occupations* of community life, it has to be said that this is the best way of bringing education nearer to life and to restore the disturbed balance between theory and practice. This objective is sought to be realised by making education *centre* on some Basic Craft chosen with due regard to the occupations of the locality. This 'Craft' is not just another subject taken on as an appendage to the items of the existing curriculum as in the case of the old-time 'Manual Training' of Sir A. P. Patro's conception in the Madras Presidency. It is not even the 'Peg' on which to hang a number of items in the curriculum. But it is to be, according to Mahatma Gandhi, the originator of this unique ideology, the very "*Pivot*" or *Centre* of the entire teaching to which all other subjects are to be *correlated*.



Vigour—School boys making soap.

(By courtesy of the
Hon'ble Sri Avanashilingam
Chettiar.)

R. K. Vidyalaya pupils
working at Basic Crafts.

Serenity and activity in Spinning.



All-round social and moral basis for education

In the course of the practice of the Craft many problems arise and many questions will flutter in the child's mind. In dealing with these questions the tactful and unobtrusive teacher will open for the child gradually the way into the realms of many subjects like History, Geography, Arithmetic, Science etc. "Thus education, starting as a unified and integral activity, will lead him (the child) into ever-widening regions of knowledge which will not need to be thrust on him but will be required in response to a felt need. Such an approach to the unlocking of the child's mind and his creative capacities is more effective and fruitful than the adoption of routine methods, because it enlists the powerful support of his instincts and offers better opportunities for co-operation and group work and thus establishes a liaison between life in school and outside. It gives useful productive work the place of honour in schools and thus affords facilities not only for the training of practical aptitudes but also for an all-round social and moral education."

The True Objectives: Development of Complete Personality and Self-Sufficiency

As every progressive movement the Basic Education movement also passed through a period of trial and criticism. Criticisms of the Scheme and Objections from orthodox educationists were systematically answered by Mahatma Gandhi himself in "Harijan". He explained that the object of the Scheme was not mere manual training but a *development of complete personality*. Another thing which he took pains to explain is the economic or "Self-sufficient" aspect of his scheme. From a report given of the work of the Basic school at Sevagram for the year 1945-46, the net income of 85 pupils earned by spinning, weaving and gardening was Rs. 1,276-4-6 which covered the monthly pay of Rs. 35 for three teachers.

Gaps in the programme of Basic Education

It is true, however, that there are serious gaps in the programme of Basic Education. In the first place, the *technique of education through Work* is yet in a preliminary stage. The literature of Basic Education has yet to be produced. The number of trained workers is yet very small. Even smaller is the number of workers who can assume responsibility. But we must be alive to the fact that Basic Education, if properly allied with the Basic Psychology and not merely with some Handicraft or other, is bound to stay in our country by whatever name it may be called. And the New Education is bound to be the basis of the programme of a truly National Education for the children of India.

Psychological implications of Basic Education

It is a matter of deep regret that the authorities and teachers have so far not been able to appreciate sufficiently the psychological implications of the conception of Basic Education, which Mahatma Gandhi did not omit altogether to mention. When Gandhiji said that the objective is not mechanical manual training but the development of the *entire personality* of the child, he has realized the *psychological factors* involved in the correct working out of the plan of Basic Education. But where are the teachers that have a working knowledge of the Basic Instincts and Impulses of the Child? So little is the interest shown by teachers in Child Psychology that it seems to be of special urgency to stress the psychological implications of Basic Education. True Education is based not merely on Craft but is ultimately based on a recognition of the Basic Impulses and Needs of the *mind* of the Child.

Need for the study of Basic Psychology

It is not sufficiently recognised that the *creative and constructive* forces of the individual, when released by proper education, - will ultimately shape human destiny. What we regard as the great ugly catastrophic events of recent national and international history are the results, not exclusively of economic forces, as our politicians and businessmen into whose hands the world has fallen today suppose, but ultimately of *psychological forces* which have been set in motion in the minds of individuals and groups. It is our humble opinion that though this fact was seen by the Father of the Nation, Mahatma Gandhi, sufficient provision has not been made to educate the teachers of Basic Education in the principles of Basic Psychology.

A Powerful Guarantee of Peace, Justice and Humanity

We are under the shadow of national and international misunderstanding. And yet education of children is not a trivial matter. On the other hand, correct education goes a long way in removing the shadow. If we concern ourselves with the system of education that is basic in the springs of human psychological factors, with this new ideology of education' based on justice, co-operative endeavour, productive work and respect for human individuality, we can direct the intellectual and emotional dispositions of the growing generations into the right channels and thereby help to constitute a powerful guarantee of peace, justice and humanity. And it will be to the credit of Free India that with all the stress and strain of organising a new national government, she has been able to show some appreciation of the *creative forces* which constitute the warp and woof of the texture of the Nation's

intellectual and moral life. Perhaps India may point the way towards a New Social Order, through this New Education. It may mean a new chapter in National and International understanding and peace!

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CHAPTER LXIII

THE PLACE OF ENGLISH LANGUAGE IN THE SCHEME OF INDIAN EDUCATION

English is an international language and is a means of international communication. The scientific and technical training in the different arts and sciences can be done effectively through English. It is the gateway to the panoramas of world thought as most of the best works of the world are available only in the English Language. The English research scholars have gone to the remote corners of the earth, discovered new books dealing with different sciences and arts, got them translated into English and added them on to the treasures of immortal world literature.

And further, as Tagore, the great Indian savant of international fame, says, it is the English education that has introduced to the East, 'through the smoke of cannon and dust of markets the idea of freedom in all directions, the ideals of moral freedom, freedom of conscience, freedom of thought and action, freedom from bondage in literature and art.' At several stages of our progress the study of English language and literature has served like a sharp axe for cutting off many false and dogmatic notions which kept the Indian mind in slavery for centuries.

English : The Predominant Language of Scholarship and Commerce

There is no denying that English is the predominant language of scholarship as well as of commercial importance in the world today. It is also of predominant importance in the transactions of international organizations as the U.N.O. A hurried replacement of it by any provincial language in India will make exchange of thought between the provinces

very difficult at the critical hour of our national existence and of the supreme need for international unity.

It is no doubt true that a national medium for teaching with regard to higher education influences for good the thought and culture of the nation. It also provides national life with cohesive forces. As such it has inevitably to be an inter-provincial, i.e., a national medium in higher education especially at the university level.

If, instead of an inter-provincial or an international language, only a provincial language is made the medium by a university, it lowers the standard of that institution and its academic efficiency. For most of the provincial languages have yet to develop the literature of scholarship in the essential branches of knowledge. And there is yet a more serious disadvantage, *viz.*, that such an university or college as would adopt a provincial language as medium of instruction will develop inevitably a parochial outlook as the choice of professors will necessarily have to be confined largely to provincial limits. Thus there will be a weakening of the inter-provincial contacts which have recently developed.

And what about the question of graduates securing employments? Surely our graduates will find it increasingly difficult to secure Jobs in provinces other than their own. It will almost be impossible for them to aspire for Jobs in All-India services or even to compete for higher competitive examinations on an All-India basis.

English : Remedy for the evil of Narrow Provincialism

Even as it is now provincialism is unfortunately on the increase. If, in addition to this, a provincial language is adopted as the medium of higher education, it will tend to foster provincial exclusiveness and undermine national unity and progress.

Let us now compare provinces in the north, in which Hindi is the language of the people, with provinces in which some other language is the vernacular of the people. Surely such a province as of the latter type will be at a great disadvantage economically as well as culturally compared to the provinces which have Hindi as the language of official and educational intercourse.

So, great care is necessary with regard to the question of the displacement of English by Indian languages. As Mr. Munshi has warned us, a hasty replacement of English by provincial languages may lead to a hindering of national unity and progress.

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CHAPTER LXIV

COMPREHENSIVE PLANS FOR ADULT EDUCATION

Need for removing the weeds of Adult Ignorance and Illiteracy

No scheme of education is entitled to be called democratic unless it comprehends the educational interests of the whole people. There are the weeds of adult ignorance and illiteracy in plenty in our country. If they are not to be allowed to smother the growth of democratic institutions and national evolution on the right lines they should be systematically and thoroughly removed. And this can be done only by evolving comprehensive plans of adult education.

These plans should not confine themselves to literacy alone, for, as we have seen, literacy, however important it may be, is only a skill and is a preliminary to education, but is not education itself.

With regard to education in Free India, it should imply the equipment with necessary knowledge for the proper functioning and healthy adjustment to environment of the entire personality of the adult and not the mere acquisition by him of skill in reading and writing. It should aim at stimulating in the adult a desire for fuller knowledge and superior efficiency, for a more fruitful use of labour and leisure, for a more definite and effective participation in the affairs of the village or the town or the country. In a word, it should aim at a greater capacity to adjustment and happiness, and to the realization of democracy in life.

To serve as an example of a comprehensive scheme of Adult Education we shall outline the scheme laid out in the programme of an International Institute by voluntary

efforts of some veteran educationists of Madras under the name of "Gandhiji Unity Memorial; The National and International Institute of Practical Psychology."

**GANDHIJI UNITY MEMORIAL :
THE INTERNATIONAL INSTITUTE OF
PRACTICAL PSYCHOLOGY**

For Mental Hygiene, Social Adjustments and International Unity

An Institute to deal, from the Psychological point of view, with the problems of individual and social life, the problems of National and International Relations and the problems of Unity, Peace and Goodwill among the people in India and in the world about us—an organization having in its fold expert Practical Psychologists and earnest students of Psychology, and having as its objective the dissemination of the knowledge of Practical Psychology applied to different fields of human life and active endeavour throughout this country and other countries as well, to whatever extent possible, through the medium of English and the Vernaculars, has been a long-felt need. This need is all the more urgent to-day than ever before. Hence this International Institute of Practical Psychology.

As it is believed that a correct understanding of Human Nature and of Human Relations and Human Needs and Urges will help a good deal in paving the way to Unity, Peace and Goodwill, which had been the Ideals for which Mahatma Gandhi had lived and died so nobly—this Institute has been dedicated to the great name of that Great Leader and Guide of Humanity. And so it is that it now stands as a fitting Memorial for Gandhiji, seeking as it does, the ways and means for the quick realization of those Ideals for which he laboured so long and so patiently, and laid down his life so very touchingly.

Aims of the Institute :**Spreading New Light from the Psychological Angle of View**

(1) To bring up to the fold of this Institute Practical Psychologists in India and in the other countries the world over, Eastern and Western, and give them an opportunity to discuss and exchange views on problems of Healthy Mental Life and Social Living and on problems of National and International Amity, by holding periodical debates, meetings and conferences, and by publishing periodical Bulletins, Books and Journals on the varied aspects of Practical Psychology which are of use in the daily life of individuals and groups of individuals both in the urban and rural parts of Free India.

(2) To offer constructive psychological suggestions useful to all persons that need them regarding the training necessary for National Service and Leadership, for Group Management and loyal service to country and Humanity.

(3) To help young men and women students, business and career-seekers, social reformers, and national workers, by instructing them on subjects like Mental Hygiene, Personality-Analysis and Development, Business and Career Technique, and Social Psychology.

(4) To help Fathers and Teachers, Mothers and Housewives, by disseminating practical knowledge through the English and the Vernaculars on subjects like Child Psychology, Psychology of Home life, Home Training and Education of Children, Animal Psychology, etc.

(5) To assist Seekers of Truth by unravelling as far as possible the Psychological implications of the noble pursuit of Spiritual and Religious Life and by discourses on subjects like the Art of Self-Realization, the Art of Personality Construction, Comparative Religion, Psychology of Religion, etc.

(6) To explore the Psychological implications of the Gandhian Doctrine of Non-Violence and the Possibilities of its International application for averting destructive wars.

(7) And likewise to be useful to Juvenile Artists by expounding to them the Psychology of Art-Creation and Art-Appreciation.

(8) In a word, this Institute seeks to throw a New Light from the Psychological angle of view on problems that concern with Universal Culture, and with the well-being and Happiness of men, women and children, and of the Peoples and Nations of the world. For, all our schemes for world-reconstruction, for the avoidance of future disastrous wars, and for our National and International Security and Brotherhood, will come to naught, unless there emerges a Leadership and a Following-up which will be effective beyond the confines of any one particular Community or Nation.

Subjects Taught

(A)

1. Basic Psychology.
2. Personality-analysis and Development.
3. Mental Hygiene.
4. Child Psychology.
5. Psychology of Woman and Motherhood.
6. Psychology and Medicine.
7. Formation of Man and World-Reconstruction.

(B)

1. Psychology of Art-Creation and Art-Appreciation..
2. Psychology of Religion and Spiritual Life
3. Efficient Social Relations.
4. National and International Amity.
5. Non-Violence and World-Reconstruction.

(C)

1. Home Psychology.
2. Animal Psychology.
3. Business and Career Technique.
4. Practical Abnormal Psychology.
5. Modern Clinical Psychology.
6. Industrial Psychology.

A Nation-wide Propaganda for Mental Health and Peace

In a word, it may be said that this unique Institute embodies a comprehensive plan for Adult Education, for removing systematically and thoroughly the weeds of adult ignorance, and not merely illiteracy, so that the people may be stimulated with a desire "for fuller knowledge and superior efficiency, for a more fruitful use of labour and leisure, for a more definite and effective participation in the affairs of the village or the town and the country, in short, for a greater capacity to realize democracy in life."

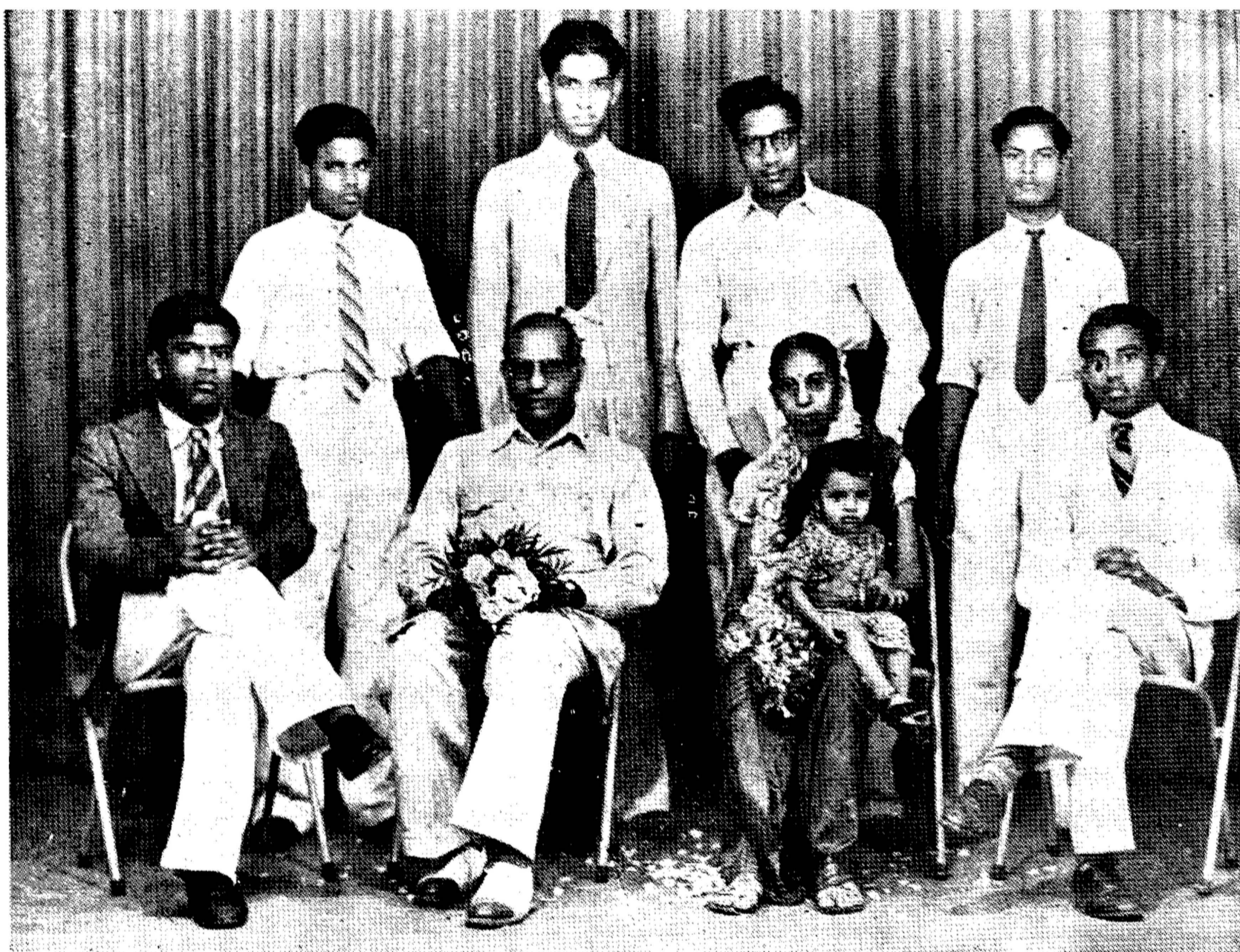
Work for the Final Unity of Mankind *

It is no doubt a stupendous task which cannot be easily performed. It is incumbent on the progressive elements of the nation to co-operate with the earnest workers in this field and quickly create an atmosphere of opinion conducive to the performance of this nation-wide propaganda ; for on the performance of this task depends the mental health and peace of the nation and perhaps the final Unity of Mankind.

* The Foundation-Director of this Institute is the author of this book. He is also the Organizing Director of World Religions Organization whose object is to work for harmony and understanding among the peoples of the world.

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(CHAPTER ON PEOPLE'S COLLEGES)		
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Gandhiji Unity Memorial :

The International Institute of Practical Psychology and
Mental Hygiene—Madras.

Director Dr. T. V. S. Rao and Mrs. Rao
with a group of student members.

CHAPTER LXV

TWO IMPORTANT TRENDS OF EDUCATIONAL POLICY IN INDIA

DEMOCRATISATION AND INDIVIDUALISM

A careful insight into the various recent educational movements which have been just reviewed will reveal two important trends of policy regarding the problem of education in Free India. The one is the idea of the *democratisation of education*, and the other is the *individualism in education*.

This *democratisation* means that our educational effort will no longer confine itself to the few as it has done in the past, and that all citizens in a democracy must attain a minimum "skill in living and working together".

The second principle i.e., *individualism* in education, has a direct and far-reaching bearing on all questions of educational reorganization. This principle implies in the first place the recognition of the patent fact that the young human being is disposed to learn by doing, that the urge to work and learn by his hands dominates in the early life of man. "At a time when boys and girls are bursting with active energy and almost invariably insist on doing things with their hands we cannot hope to 'educate' them by making them sit silent and grim brooding over books and unwillingly swallow unassimilable information to get educated by other's grace!"

The principle of individualism also implies a respect for the individuality of the pupil and a recognition of the need for the cultivation of that which gives to an individual mind its specific characteristic quality so that it may be suitably educated and brought to its full development. That is why

it has often been advocated that in the future re-organization of our educational system we shall have to provide for a close observation of the aptitudes of the pupils and for sending them, after their mental constitution has been discovered, to one of the several kinds of higher schools or colleges which should be simultaneously organised.

Conditions which must be fulfilled for Speedy Realization of the Educational aspirations of Free India

Obviously there are some conditions which must be fulfilled for Free India to come in line with U.S.A. and U.S.S.R. with regard to literacy and popular education.

(1) In the first place, what is needed is the transformation of the educational effort in India into an enthusiastic educational crusade against illiteracy and ignorance on a nationwide basis. It should aim at sweeping away alike both the people's indifference and the timid tardiness of the administrators. This requires in particular, among several things, as the Director of Public Instruction in a province in Northern India has said, an educational machinery which is efficient and well co-ordinated and which should possess initiative and freedom and rise above red-tapism.

(2) This large-scale effort requires quite an army of men and women who are well-qualified and trained, and above all who are inspired by an ideology of service and an understanding of the large issues of their work.

(3) This effort requires men and women who are not merely glorified head-clerks but who have imagination and who can plan on a large scale and translate ideals and visions into concrete realities.

(4) Above all, this large-scale movement would require in these workers, from the highest to the lowest, "something of that generous enthusiasm for Humanity which transforms

patient drudgery for a good cause into an instrument of joyous self-expression and sets even the meanest work aglow with the *sacred fire*."

A Crusade for Educational Uplift

Here in India in this most important matter of the education of our people, our success will be ensured only in the measure in which we can provide such an organization and such inspired workers. We cannot see how else it will ever be possible to carry on a crusade for the educational uplift of one-fifth of the entire human race, which constitutes the masses of people, the inhabitants of Free India.

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CHAPTER LXVI

RELIGIOUS EDUCATION IN SCHOOLS

The Problem of Teaching Religion

Today the problem as to whether there should be or should not be religious education in our schools is in the forefront of the minds of people. Both in the East and in the West there are now a large number of persons who are for excluding religion altogether from schools. Their fear is that *sectarian religion* may be taught by unimaginative teachers to boys and girls and that this may result in discord in their minds instead of mutual love and esteem. Sectarian education in childhood undoubtedly constitutes the major reason for the curse of the presence of so many prejudiced and narrow-minded people now existing in the world.

There are others who hold the view that mere *ethical teaching* may be given to our young ones unmixed with any religious doctrinal teaching. It seems to be on the whole better to exclude religious education altogether if by this we mean the teaching of narrow-minded sectarian religion.

May Comparative Religion be Taught?

It does not also seem to be safe to teach the school boys and girls Comparative Religion,—for there is bound to be a tendency in the average teachers to make their own religion the standard with which to measure the value of all the other religions. It may also lead teachers to compare the best of their own religion with the worst of the other religions. And this may mean strengthening the already existing prejudices.

Advisability of Imparting Knowledge of all Religions side by side

It is, however, quite possible to teach the young ones the fundamental principles of each of the great religions of the

world, side by side, without instituting any comparisons or contrasts whatsoever, so that Hindu children may know not only of Hinduism but also of Christianity, Islam, Buddhism, etc., and Muslim or Christian children may know something of Hinduism, Buddhism, Zoroastrianism and other religions in addition to their own religion. In this way there may be an unbiassed study of all the world's greatest religions. And such a study may be started with much hope at a very tender age of the children.

Interesting Story Material and Biography

With regard to the material for religion, the best thing to do seems to be not to burden the young brains with dry doctrines and abstract philosophical and theological discourses but to saturate their minds with lots of interesting story material. The parables of Jesus, the Jataka stories of Buddhism, the events of Mahammad's life, and the simple tales of Bhagavatha or Ramayana will all be interesting to the simple minds of the children. And they will also be instructive and inspiring.

The futility of Barren Teaching of mere abstract Ethical Principles

To teach children only the dry bones of ethical injunctions and withhold such things as the above from them is to deny them what will stand them in good stead in their lives sooner or later. A knowledge of the lives of different religious heroes and of the movements inaugurated by them plays a great part in the development of the religious consciousness of the growing boys and girls.

The Age at which Children are fit for Religious Instruction

Only the best illustrative stories are to be selected from different sources for teaching very young children. Children

of very tender age may be taught biographies of historical personages who were world's religious leaders and who inaugurated vast movements for the development of the mind and spirit down the ages.

And, until the age of fifteen or over, there should be no abstract teaching, no creeds, no catechisms, no *sutras* or *sastras*. The only thing that should be done is to attempt through biography and history to inspire the children with love and reverence for the great spiritual and moral leaders of the human race.

Narrowness of Outlook to be Avoided

Thus to bring young children under the influence of the greatest sons of the human race is the best religious training that can possibly be given to them in schools by broad-hearted and well-trained teachers. But there should be no such narrowness as presenting the lives of the great ones in one's own religion only. To correct such a narrowness there should be a teaching of the great men and women of every age, of every race, and of every religion. If correctly understood and taught, religion can be the greatest force in the world. Religion can give selflessness, fearlessness, and inspiration for loyal and devoted service.

Fostering Sympathetic understanding between People of different Religions

Such an approach as this to the problem of religious teaching in schools would lead to sympathetic understanding between people of different religious traditions. It also produces in the pupils, strong and self-reliant attitude to life. And, further, a truly valuable religious spirit may develop in the individuals instead of the ordinarily prevailing superstitious fear-ridden type of religiosity.

The need for Teachers of the right Spirit

There is no doubt that this kind of religious teaching will find suitable response in the children of all religious denominations. But the difficulty lies in securing teachers of the right spirit and attitude. Mere scholastic knowledge of the theology or philosophy is not the all-important matter. The first requisite in a teacher of religion is a profound *love* and *reverence* for the world's great spiritual teachers. The second requisite is a *thirst for truth*, an open-mindedness and ability to recognize and revere it wherever it may be found. And a third requisite is a *real understanding of religious experience*. The teacher of religion must be one who believes and has tested that *religion is the quest for spiritual realities*,—Truth, Beauty and Love, the quest for God, the Supreme Reality. His motto should be that religious teaching can only be a signpost showing the path the pilgrim must tread. And his belief should be that the quest is no ideal dream nor cold-blooded intellectual exercise, “but the most splendid and magnificently worthwhile of all the activities possible to the mind and soul of man.”

Creation of a Better Humanity on Earth

If religious education is carried on in this spirit, the consequences will be great with regard to the *creation of a new humanity on earth*. But the piteous need of the world today is as Prof. T. L. Vaswani said, for “men and women who, rich in the wealth of renunciation, will wander from place to place with the Dream in their eyes of the great Unity of Races and Religions.” Religious education carried in the spirit that has been indicated above and by the right people with “the Dream in their eyes,” can do much to satisfy that piteous need of the world.

Gandhiji's views regarding Religious Instruction in Schools

The following is Gandhiji's answer to a question regarding religious instruction. "We have left out the teaching of religions from the Wardha Scheme of education because we are afraid that religions as they are taught and practised today lead to conflict rather than unity. But, on the other hand, I hold that the truths that are common to all religions can and should be taught to all children. These truths cannot be taught through words or through books—the children can learn these truths only through the daily life of the teacher. If the teacher himself lives up to the tenets of truth and justice, then alone can the children learn that truth and justice are the basis of all religions."

There is another question which Mahatma answered, *viz.*, whether it is possible to teach children between the ages of seven and fourteen, equal respect of all religions. "Yes, I think so. The truth that all religions are the same in essentials, that we must love and respect others' faiths as we respect our own, is a very simple truth, practised by children of seven. But, of course, the first essential is that the teacher must have this faith himself."

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CHAPTER LXVII

EDUCATION FOR THE CREATION OF A BETTER HUMANITY

The Central Problem of Education Today

Education has many tasks. But the Central problem is what raises man above the savage? Is it man's inventions, his science, his engineering wonders? Do these raise man above the savage? Recent history shows that these things do not necessarily civilize men. On the other hand they may lead men even to a lower level than that of any savage tribe. What is really defective is not, however, our material civilization. It is ourselves. As Sir Richard Livingstone stated in his recent book, *Some Tasks for Education*, "the real issue is whether men are to be ruled by power, pleasure or the latest bright toy which they have created, or by goodness, beauty, reason." We need an education which teaches us how to use the power we acquired through science, how to use it well. The most difficult and important task of school and university is to build up in every man and woman a *solid core of spiritual life*, which will resist the friction of everyday existence in our mechanised world. The real modern problem is *how to humanize man*. It is how to show man the spiritual ideals without which there can be no genuine success or lasting happiness. This is the problem of education today, the problem as to how to produce men "who will know not merely how to split atoms but how to use their powers for good."

The Supreme Object of Creating a Better Humanity

The teacher should not be expected to work for the service of any political or social creed. He should work in the service of the complete human being, "able to exercise in

freedom a self-disciplined will and judgment, unperverted by prejudice and undistorted by fear and hatred." In a word, education should have for its ultimate purpose the *creation of a better Humanity* on earth. If *human unity* is at last to be organized on earth, it can be done only by an education that will give appreciation of the results of human constructive enterprise and co-operation with the Cosmic Plan and the Will of God actively expressed in the whole of His Creation."

What Right Education can Achieve

Right Education alone can remove the contradictions and differences that beset the onward march of man. The results that can be achieved by right education can be achieved in no other way, either political or social. "It requires the influence of sacred and deep things to move the spirit, and the new children of civilized humanity must be given a profound emotion and enthusiasm for the holy cause of humanity." Then reverence for truth will grow in natural freedom. The barriers will then give way, whatever they may be, and better mutual understanding of human purposes prevails. We are indebted, and also generations of children in all countries of the world will be indebted, to Mahatma Gandhi and Madame Montessori who espoused the neglected cause of the poor and of the child. The poor have always been neglected. And both among the rich and the poor there is another class which has been neglected. This is the class of children.

The Deeper Needs of the Child

The needs of the child are far greater than food, clothing and shelter. In the child exist forces that may remain curbed or may now be taken up and developed as has not before been widely possible. "On the satisfaction of his

more spiritual needs the progress of humanity depends—the creation indeed of a stronger and better humanity.”

The adult is beyond reform. Experiments with him repeatedly fail, for “he is a tough subject, too set in his mould for the revelation of new human possibilities.” The remedies may be far more effectively applied to the child than to the adult. So the school bears special responsibility to the child.

The Garment of Humility

As Madam Montessori proclaims, there is something which humanity lacks fundamentally, and it is to be sought in the very origin of life. There alone can be found the key. So psychology and sympathy should necessarily play a bigger part in the method of educating the child. The first thing the teacher has to learn is “to shed omnipotence and to become a joyous observer.” “If the teacher can really enter into the joy of seeing things being born and growing under his own eyes, and can clothe himself in the garment of humility, many delights are reserved for him that are denied to those who assume infallibility and authority in front of a class.”

Dangers of Repression

Another thing which a teacher of the new education has to learn is that one cannot develop by repression. Repressing and commanding are easy and tend to destroy what is precious in the child. The old-fashioned teacher exalts his own virtues and punishes the little ones for disobedience. But obedience is no mechanical thing, but a natural force of social cohesion, intimately related to the will. “Obedience of the right kind is a sublimation of the individual’s will, a quality in the human soul without which society could not exist. But an obedience which is not the consequence of an awakened and exercised will, brings whole nations to

disaster.” Hence Madame Montessori recommends that the new teacher should make this renunciation of power and authority to find himself immensely the gainer by losing them. He achieves thereby the patience of a discoverer, the intense interest in watching the blooming of young souls.

The Blooming of a New Humanity

And, in the blooming of those souls, there is the blooming also of a new age and a new and better Humanity on earth, which knows no strife, rivalry or exploitation, no greed, violence or petulance, but only sweetness and grace, good will and love for all!

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CHAPTER LXVIII

SOCIALIZING THE EDUCATION IN FREE INDIA

THE ROLE OF BASIC NATIONAL EDUCATION

Education for Life

It is Mahatma Gandhi that, more than any one else in the world, has insisted on first things being put first, when he championed craft-centred education. We do not live in order to think. But we think in order to live. Education is for Life. It is co-extensive with Life itself. As Gandhiji said, "Education covers the entire field of life, there is nothing in life however small which is not the concern of education."

In the West also there have been signs of revolt against exaggerated intellectualism in the educational field. It is being realized that education in the past had been narrowly intellectual. It has too frequently been confused with mere book-learning, and too little attention is given to the much more important and comprehensive Art of Learning. Dr. Montessori complains that "the school overworked and victimized the child"; and she has worked so well for bringing about a change in the outlook of the educationists. The child is now slowly emerging from oblivion and from age-long neglect dating perhaps from the beginning of human history. After all he is becoming visible now to society which ignored him.

Sevagram Talimi Sangh Educational Experiment

The Indian educational world is indebted also to educational adventurers like Sri Aryanayakam and Srimati Asha Devi of Sevagram Talimi Sangh who have put their heart and soul in demonstrating the practicality of the ideal of Gandhiji that education can become "co-extensive with life

itself—with cleanliness and health, with citizenship, work and worship, play and recreation—all this not as separate subjects of the syllabus but as inter-related processes for the development of a harmonious and balanced life.”

It should, however, be borne in mind, as Sri Aryanayakam has pointed out, that the ultimate objective before this New Education is not only a balanced and harmonious individual, but a *balanced and harmonious society*. It is in Gandhiji’s words, “a Juster social order in which there is no unnatural division between the ‘haves’ and the ‘have not’s’ and everybody is assured of a living wage and the right of freedom.” It is good indeed that the Nai Talim institution at Sevagram with its five departments* of activity has as its first task the building-up of a *co-operative self-sufficient community*—“a community which will be able to meet many of its aesthetic, spiritual and intellectual needs—creating its own art, music, literature and drama—and above all a community where man will be respected as man and there will be no distinction of caste, class or creed—where all religions and faiths of mankind will be equally honoured.”

The Problem of Socializing the Education

Never before has the task confronting the public school system of a nation been so complex, so vital, as it is in India today. Never has any teaching body stood so much in need of skill and vision, of technique and imagination, of factual knowledge and of social ideals, as the teachers in India today. Like all other countries in the world, India

*The following are the five departments of activities referred to : (1) The Pre-basic School and Grades I to II of the Basic School. (2) Adult education. (3) Anandaniketan, the Residential Basic School for children from 7 to 14 years. (4) The Post-basic department corresponding to the university stage for boys and girls who have completed 7 years of Basic Education. (5) The Training Institute for workers and teachers. (New Education—Sri Aryanayakam).

is now facing a readjustment of forces and ideas. And to the teachers in India we look in the coming years for nearing the structure of a liberal and harmonious national and social life. To contribute to this work of reconstruction, to tune the mind and heart of future generations to this readjustment—such is the problem of our public schools.

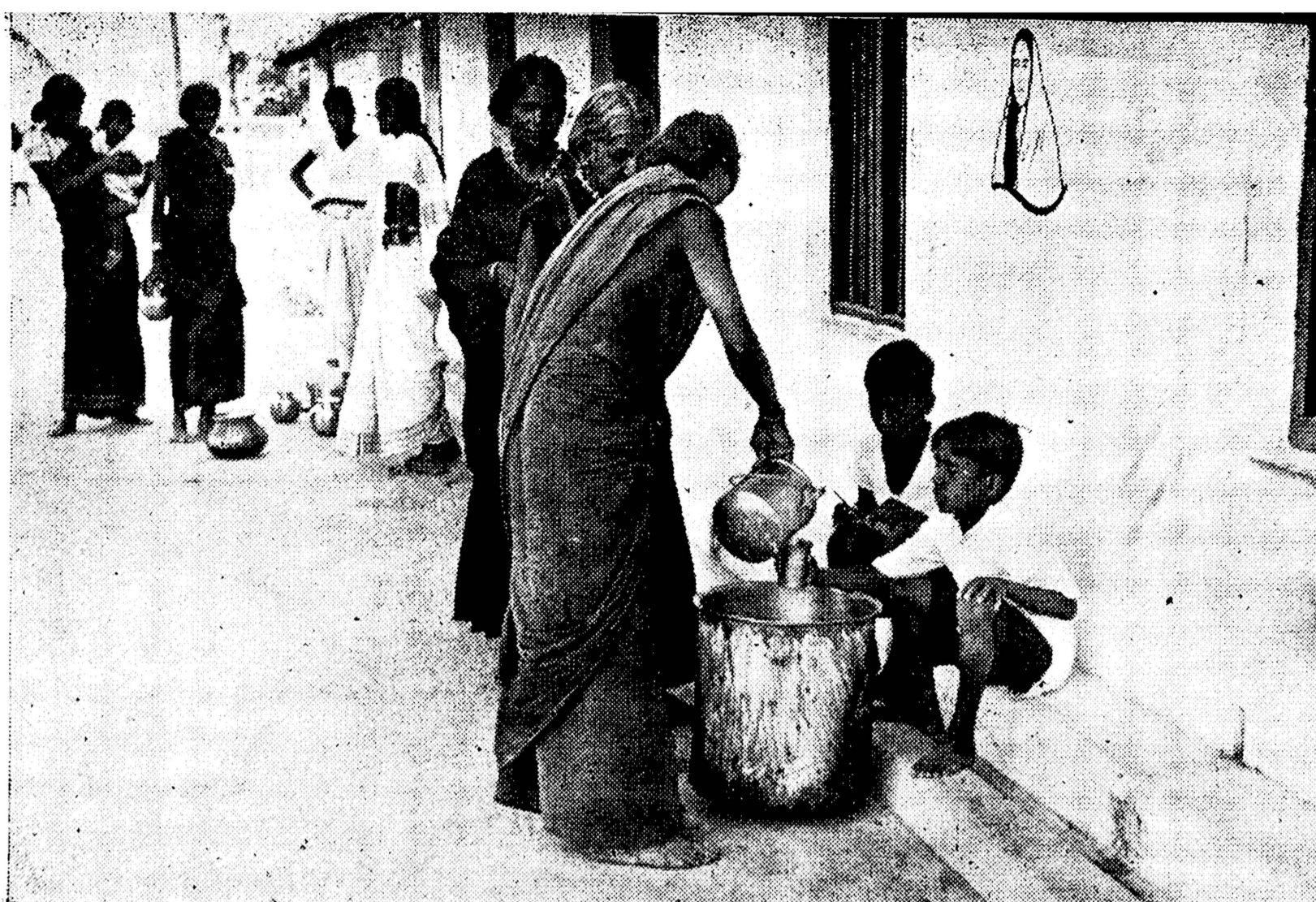
We are on the brink of a vast educational readaptation to life, a vast *socialization* of instruction to meet the new complexities of our national life. And the education of tomorrow's India will have to be done, not as hitherto, in the artificial vacuum of the class-room, but in the open air of life. The teachers will have to work from a clearly formulated social and economic philosophy, and the central fact in public schooling will have to be at last a *Social Ideal*.

Education to be effective must adjust itself to the outside world. The question in the heart of the teacher will no longer be "how best I can teach the child to read, write and calculate?" But the question will be "how best I can fit the child to live and survive in the world we know and also bring into being a better world?" This is the growing point in education everywhere, and this is the growing point in education in India.

The Direction which Mahatma Gandhi gave

Here lies the direction which Mahatma Gandhi has given us distinctly regarding the future of educational progress in India. Here is the line beyond which we should widen the horizon and reach out for new methods and ideals. We have to know what relation do the subjects of school study bear to social progress, and by what methods we should teach them to get out of them their greatest value.

If we take a sweeping glance at the outstanding features of the life in India today, we shall be able to see the landmarks, the paths along which childhood may be led through. On



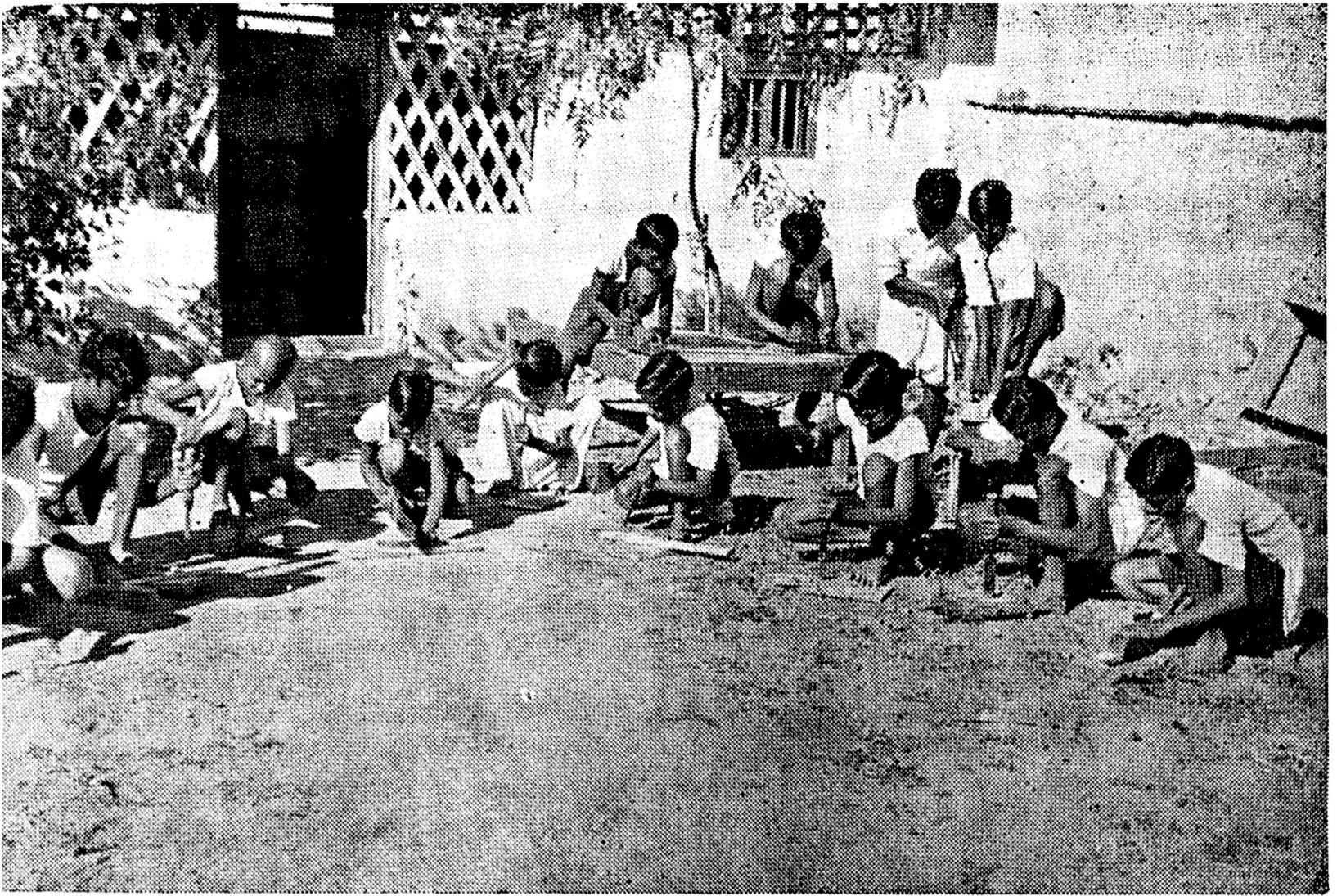
The Village Touch—
One boy gets milk measured, the other one keeps the account.

(By courtesy of the
Hon'ble Sri Avanashilingam
Chettiar)

R. K. Vidyalaya Basic Education Centre.

Pupils at domestic work—The hard task of grinding cheerfully done.



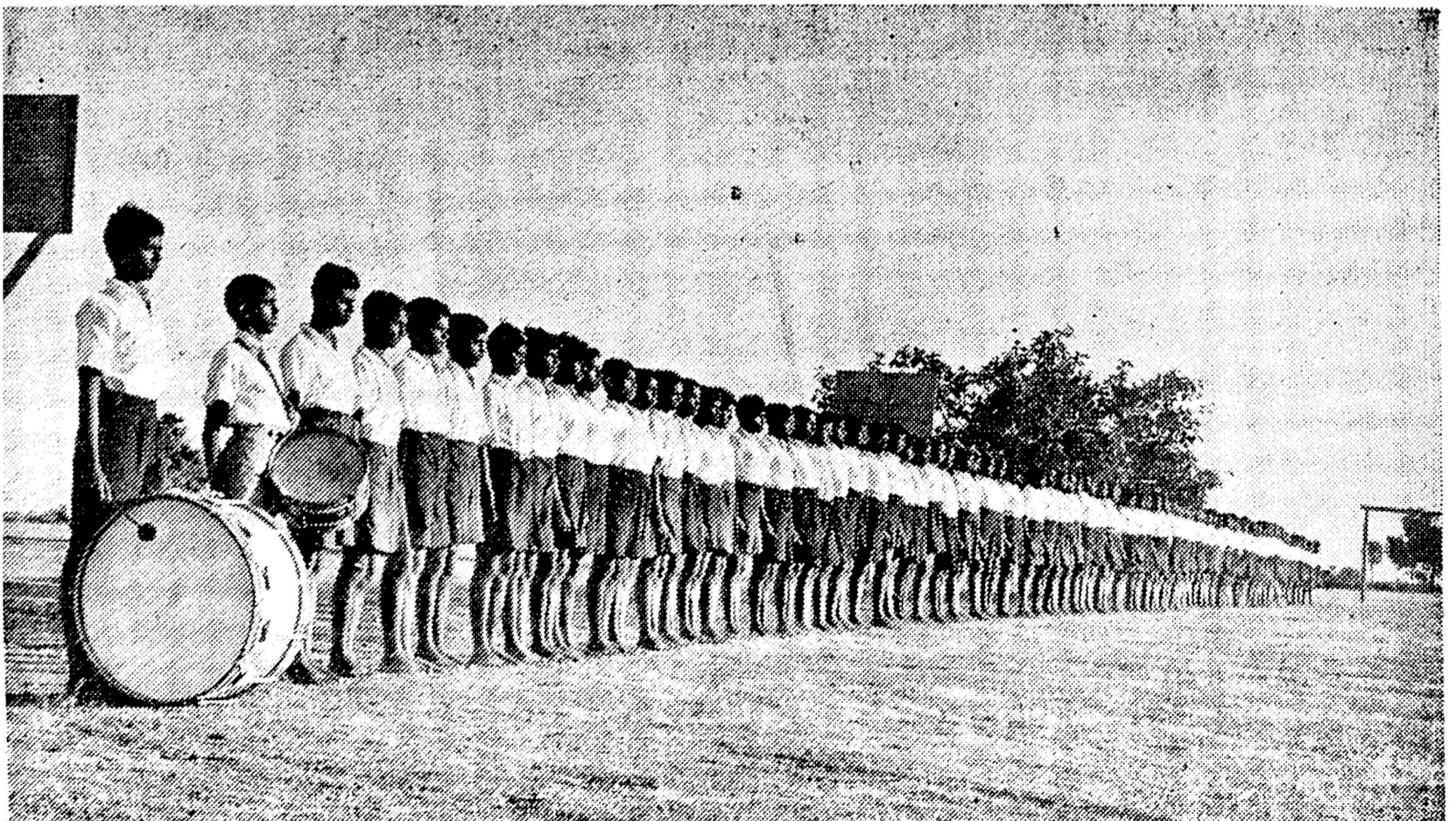


Craft work—Carpentry.

R. K. Vidyalaya—
Basic Education Centre.

(By courtesy of the
Hon'ble Sri Avanashilingam
Chettiar)

Discipline, Order, Rhythm—but certainly not Fascism!



account of the present popularity of newspapers and magazines in the country, our pupils require, not only to reap the fruits of intensive study of books on special subjects but also learn the joy of rapid reading. There is the need always for them to learn useful crafts as well as some one or other of the fine arts, to enliven their life. There is also the need for the cultivation of taste for music and painting and group dancing and other cultural activities. These things are necessary both for the poor and the rich; for without them life would be boring indeed and life is emptied of refining influences. The force of this widening circle of culture which is being felt in the realm of education gives us an opportunity as well as a problem.

Problems, Opportunities and Difficulties of the New Teachers

The *problem* of the new teacher arises from the fact that he is confronted with different cultural levels but with widely varying individual ability. And the *opportunity* lies in the possibility of the teacher imparting his knowledge, views of life, tastes, manners and ideals to children coming from homes in localities in which may be rampant feuds, superstitious beliefs, uncharitable caste prejudices and discriminations and general ignorance. But there is also a *danger* in the situation. The danger lies in two facts. In the first place, the pupils have no home advantages. And, secondly, the teachers themselves are most often immature and ill-placed in life. These poorly paid and ill-provided instructors tend to lapse into an unfortunate state of stolid self-satisfaction and lack of imagination. They are heavily worked and sometimes ill-treated by all sorts of bosses, so that they cannot fully rise to the dignity of their noble profession. This common treatment of Indian teachers with scant consideration and sometimes with discourtesy tend to dishearten

them, so that even if they have a desire to grow and expand their culture, they cannot develop beyond the elementary aspects of things and get into the genuinely human element in what they teach.

It is not an easy thing to be a real teacher. The teacher who gives real impetus and enthusiasm for learning, thinking and doing the right things should be a scholar, a pedagogue and a practical leader all together. He should have the weight of factual knowledge no less than breadth of vision and penetrating insight, which gives truth, force and liveliness to his teaching in all its varied aspects. He should hold in the hollow of his hand the details of his subject and use them for a large imaginative presentation.

Need for evolving correct National Spirit and Aim

The expansion of political duties and activities brings sharply before Free India the necessity for evolving a conscious and correct national spirit and national aim, and for avoiding the kind of narrow and murderous nationalism which resulted in recent whole-sale bloodshed and devastation of the world-wars. For this a *social adjustment*, a *social unity* of the different classes and communities of people is necessary. It is the task of cultured leaders and teachers to arrest the forces of social disunion, and to lift, purge and fortify our civilization. In every phase of life should be preserved the 'heights' which the national soul has soared to reach and the 'depths' which the eastern culture in particular has dived to touch.

And, this work of purifying, lifting and strengthening our civilization necessarily implies the reconstruction of our social institutions, the recasting of them in the democratic mould. This reconstruction, however, implies first the enrichment of personality by a freer and fuller common life. And for this enrichment of personality a rich and resourceful

background of national culture should be supplied to the people. And who can supply this if not the cultured teachers of the youth of this country?

But what is it that these teachers can do for the purpose of supplying this rich and resourceful background of national culture? They may take up the rough material of our *common daily life* and shape it into a form which can express its *inner meaning*. They have to *create* "in manners and customs, in art and music, in dress and architecture, in commerce, industry and agriculture", spontaneous outgrowths of Indian feeling, modes and forms of life conducive to our human development.

Striking aspects of Indian life today

A cursory review of Indian life today presents four striking aspects,—(1) a rapidly widening circle of culture; (2) a progressive humanization of social customs; (3) a system of representative liberal government which, while being liberal, demands of the citizens cultivated intelligence and up-to-date efficiency; and (4) a growing national consciousness which seeks greatness through excellence and inter-communal co-operation. For carrying out the diverse tasks of her national and social future, India has to prepare the necessary tools. Under the guidance of expert educationists of vision and foresight like Rabindranath Tagore, and social and political emancipators like Mahatma Gandhi, India has begun to prepare these tools. But this educative work of life cannot possibly be slow hereafter. Its deep and sure processes have no doubt to be accelerated.

Our schools and colleges have no doubt so far been very slow in recognizing these social and national problems that concern the common and the larger life of the country. The routine of the daily life of the teachers which is measured by the *number* of hours of work has obscured it. It is no

wonder then that, while on one side the forward politicians of the country cry hoarse for political rights and national development, the school and college hostels on the other side continue to have several sections for dining purposes based on mere caste considerations.

Need for a Coherent Social Programme

This failure of education in general in India in grappling with such national and social problems is due to the fact that education till now has been occupied with the problem of being safe at the risk of being even insipid. It is not possible to teach socially unless one has a sound social theory. But very rare were the teachers with a social theory. Our teachers, alas! tended to drift more on traditional lines than to ascend to rational and national heights, for it might injure them to be otherwise!

The urgency of the present crisis, however, requires the immediate formulation of some *coherent social programme*, not merely for individuals but for the whole school system, for relating courses of study to that programme and for turning out pupils with definite and correct social standards and ideals. To give the youngsters of Free India, though indirectly, in an interesting and suggestive manner, some knowledge of the origin and growth of social institutions and the nature of current industrial, political and social organization, is the task of Education today. To teach the child the history of human civilization through its varied stages, to lead him to understand the forces at work today, and to fit him for his share in the common life—this also is the function of Education in India today.

Cosmopolitan Outlook

It is very gratifying to find that we have in our midst a successful experiment done at Sevagram which has de-

monstrated as to how we may begin to fulfil these functions and realize these social and national ideals. Universal training for the youth of both sexes for national service, for subordination of self to the common cause is indeed the prime requisite for Indian national strength. And this seems to be in the forefront of the minds of the leaders of the New National Education centres at Sevagram, Brindavan and Rajkot. They go a long way indeed in showing how the thrilling idealism and spirit of self-consecration and national fervour may be crystallized into educational institutions of the new type on a cosmopolitan basis,—for the co-operative self-sufficient community which they seek to build in their different centres is a “community which consists of both children and adults, pupils, teachers and workers—men and women from all the provinces of India, from all castes and representing the different world faiths.”

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