UNIVERSAL
LIBRARY

OU_148410

UNIVERSAL
LIBRARY

OUP—390—29-4-72—10,000.

OSMANIA UNIVERSITY LIBRARY

Call No. 370.15 B37 P Accession No. 16 1647

Author

Title

This book should be returned on or before the date last marked below.

McGraw-Hill Series in Education

HAROLD BENJAMIN, *Consulting Editor*

Psychological Factors in Education

Selected Titles from

McGraw-Hill Series in Education

HAROLD BENJAMIN, *Consulting Editor*

Beaumont and Macomber · PSYCHOLOGICAL FACTORS IN EDUCATION
Bent and Kronenberg · PRINCIPLES OF SECONDARY EDUCATION
Bobbitt · THE CURRICULUM OF MODERN EDUCATION
Broom · EDUCATIONAL MEASUREMENTS IN THE ELEMENTARY SCHOOL
Broom, Duncan, Emig, and Stueber · EFFECTIVE READING INSTRUCTION
Brubacher · MODERN PHILOSOPHIES OF EDUCATION
Brubacher · A HISTORY OF THE PROBLEMS OF EDUCATION
Butler and Wren · THE TEACHING OF SECONDARY MATHEMATICS
Butts · A CULTURAL HISTORY OF EDUCATION
Crow and Crow · MENTAL HYGIENE IN SCHOOL AND HOME LIFE
Croxton · SCIENCE IN THE ELEMENTARY SCHOOL
Davis · EDUCATIONAL PSYCHOLOGY
De Young · INTRODUCTION TO AMERICAN PUBLIC EDUCATION
Fedder · GUIDING HOMEROOM AND CLUB ACTIVITIES
Fernald · REMEDIAL TECHNIQUES IN BASIC SCHOOL SUBJECTS
Good · DICTIONARY OF EDUCATION
Heck · THE EDUCATION OF EXCEPTIONAL CHILDREN
Hill and Ewing · MATERIALS AND METHODS FOR VOCATIONAL TRAINING
Jones, Grizzell, and Grinstead · PRINCIPLES OF UNIT CONSTRUCTION
Kaulfers · MODERN LANGUAGES FOR MODERN SCHOOLS
Kaulfers, Kefauver, and Roberts · FOREIGN LANGUAGES AND CULTURES IN AMERICAN EDUCATION
Mays · PRINCIPLES AND PRACTICES OF VOCATIONAL EDUCATION
McCullough, Strang, and Traxler · PROBLEMS IN THE IMPROVEMENT OF READING
McKown · ACTIVITIES IN THE ELEMENTARY SCHOOL
McKown · HOME ROOM GUIDANCE
McKown and Roberts · AUDIO-VISUAL AIDS TO INSTRUCTION
Mort · PRINCIPLES OF SCHOOL ADMINISTRATION
Mort and Reusser · PUBLIC SCHOOL FINANCE
Mursell · SUCCESSFUL TEACHING
Myers · PRINCIPLES AND TECHNIQUES OF VOCATIONAL GUIDANCE
Peters · THE CURRICULUM OF DEMOCRATIC EDUCATION
Roberts, Kaulfers, and Kefauver · ENGLISH FOR SOCIAL LIVING
Schorling · STUDENT TEACHING
Smith, Standley, and Hughes · JUNIOR HIGH SCHOOL EDUCATION
Sorenson · PSYCHOLOGY IN EDUCATION
Thorpe · PSYCHOLOGICAL FOUNDATIONS OF PERSONALITY
Updegraff and Others · PRACTICE IN PRESCHOOL EDUCATION
Warters · HIGH-SCHOOL PERSONNEL WORK TODAY
Wilson, Stone, and Dalrymple · TEACHING THE NEW ARITHMETIC
Winslow · THE INTEGRATED SCHOOL ART PROGRAM
Winslow · ART IN ELEMENTARY EDUCATION

Psychological Factors in Education

by

The Late HENRY BEAUMONT

Professor of Psychology
University of Kentucky

and

FREEMAN GLENN MACOMBER

Professor of Education
Drake University

FIRST EDITION

New York Toronto London
McGRAW-HILL BOOK COMPANY, INC.
1949

PSYCHOLOGICAL FACTORS IN EDUCATION

Copyright, 1949, by the McGraw-Hill Book Company, Inc. Printed in the United States of America. All rights reserved. This book, or parts thereof, may not be reproduced in any form without permission of the publishers.

Preface

This text is written primarily for students of education who are undertaking a study of psychological factors and their implications for classroom teaching in elementary and secondary schools. It is hoped that it will also serve the needs of teachers in the field whose experience has indicated a need for further study.

As most teacher-education curriculums prescribe a course in general psychology as prerequisite to the study of educational psychology, the authors have assumed that the reader has a fair knowledge of the physiological basis of learning. They have tried to make this discussion a continuation of the student's learning, with the chief emphasis on the application of psychological knowledge to the educational process in the public schools.

Every effort has been made to present the discussions in a manner understandable by beginning teachers rather than to prepare a "scholarly" manuscript. The authors have drawn freely upon many sources and have been greatly influenced by the writings of numerous psychologists and educators. In the interest of clarity and coherence, however, no excerpts have been included. Self-evaluation exercises have been constructed for, and incorporated in, each chapter. These are for the purpose of providing challenges to the thinking of each student in his study of the various chapters, to furnish instruments for self-evaluation, and to provide stimulating problems for class discussions.

FREEMAN GLENN MACOMBER

DES MOINES, IOWA
January, 1949

Contents

PREFACE v

CHAPTER I. INTRODUCTION: PSYCHOLOGY AND THE CLASSROOM TEACHER 1

CHAPTER II. ORGANIC BASES OF ACTIVITY 7

Problems. Discussion. The Nature of Organic Activity. Organic Needs. Learning to Satisfy Needs. Meeting New Situations. Self-evaluation Exercise. Suggested Readings.

CHAPTER III. SOCIAL NEEDS AND INTEGRATION 34

Problems. Discussion. Responding to the Environment. Expanding Concept of Self. Differential Activity Patterns. Experiential Effects. Self-evaluation Exercise. Suggested Readings.

CHAPTER IV. THE EFFECT OF EMOTION ON ACTIVITY . . 58

Problems. Discussion. Organic Mechanism of Emotion. Effects of Excitement on Behavior. The Intensity of the Emotional Reaction. Self-evaluation Exercise. Suggested Readings.

CHAPTER V. THE EFFECTS OF SUCCESS AND FAILURE . 79

Problems. Discussion. The Experience of Success. Choosing between Alternatives. Forming Habits. Developing Interests. The Effect of Failure. Refusing to Admit Failure. Adjusting to Inevitable Inadequacies. Making the Most of the Situation. Educational Experiences. Self-evaluation Exercise. Suggested Readings.

CHAPTER VI. GUIDING PUPIL EXPERIENCES 112

Problems. Discussion. Educational Points of View. Traditionalism and the Educative Process. Extreme Progressivism. Teaching as a

Guidance Process. The Requirements for Modern Teaching. Self-evaluation Exercise. Suggested Readings.

CHAPTER VII. PROVIDING FOR GENERAL NEEDS 140

Problems. Discussion. Organic and Social Needs. Meeting Organic Needs. Meeting Social Needs. Self-evaluation Exercise. Suggested Readings.

CHAPTER VIII. INDIVIDUAL ABILITIES AND SPECIAL NEEDS 165

Problems. Discussion. The Concept of the Average Child. General Ability. Special Abilities. Special Needs Based on Deviations. The Integration of Abilities. Self-evaluation Exercise. Suggested Readings.

CHAPTER IX. RELATING EXPERIENCES TO NEEDS AND ABILITIES 191

Problems. Discussion. Adjusting the Curriculum to the Learner. Determining Levels of Possible Achievement. Adjusting the Learning Situation to the Learner's Level of Maturation. Self-evaluation Exercise. Suggested Readings.

CHAPTER X. MOTIVATION AND DISCIPLINE 217

Problems. Discussion. Motivation Required for Meaningful Behavior. Types of Motivation. Discipline in the Conventional School. Self-discipline through Adequate Motivation. Self-evaluation Exercise. Suggested Readings.

CHAPTER XI. CRITERIA OF SUCCESS 237

Problems. Discussion. Success and Failure. Evaluation. Competitive Grading Systems. Defects of Competitive Grading as a Criterion of Success. Characteristics of an Adequate Evaluation Program. Self-evaluation Exercise. Suggested Readings.

CHAPTER XII. PERSONALITY ADJUSTMENT 263

Problems. Discussion. Developing Individual Personalities. Attempts at Adjustment. Rejection. Acceptance. Defiance. Teacher Responsibility. Self-evaluation Exercise. Suggested Readings.

CHAPTER XIII. PSYCHOLOGICAL PRINCIPLES AND THEIR IMPLICATIONS FOR TEACHING 287

Problems. A Summary. Self-evaluation Exercise.

INDEX 309

CHAPTER I

Introduction: Psychology and the Classroom Teacher

Why study educational psychology? The usual answer is, "So you can be a better teacher." A much more acceptable answer is that the way in which you teach—in fact, your whole attitude toward students and the educative process—is determined to a high degree by what you understand, or fail to understand, about the nature of the learner and the learning process. Many of the major controversies raging in educational circles today grow out of differences of belief, not only about the major responsibilities and aims of the school, but about the means of their accomplishment. Two teachers, for instance, may be in complete agreement regarding certain aims of education, yet differ greatly in their whole classroom organization and procedure, and this primarily because they are not in agreement on basic psychological concepts.

During comparatively recent years the curriculum of the public school has been undergoing rapid and, in many ways, radical changes, based chiefly on two causal factors: (1) changing concepts of the aims and responsibilities of education, and (2) changing concepts of the nature of the learner and the learning process.

Effective teaching in the school of today is possible only if the

teacher has a clear understanding of the function of the school in a democratic society and, more specifically, of the aims of education. This is essential to give direction to the teaching process. It is equally important that the teacher understand the nature of the pupil and how he learns, if an effective classroom learning situation is to be developed and maintained. The full implications of the above statements can best be illustrated by a presentation of actual school situations in which the basic psychological beliefs of those in charge have resulted in greatly differing teaching procedures and school organizations, even with common accepted aims.

1. Mr. Wilson and Mr. Jensen are principals of two junior high schools in a city school system. Both believe that pupils must grow up to be dependable, law-abiding citizens and agree that this is one of the major aims of education. Mr. Wilson studied psychology during the period when behaviorism dominated much of psychological thought and is a firm believer that an individual's behavior patterns are determined chiefly by the environmental conditions under which he lives—in other words, that he is a creature of his environment. Education is fundamentally a matter of conditioning. Set up the environment in such a way that the pupil cannot help but react in the desired manner, and you so condition him that his behavior patterns are set for life.

In order to achieve proper conditioning of the pupils, the whole school program is very carefully planned by the faculty. Halls are supervised and pupils required to maintain quiet and orderliness at all times. An air of informality is observed, but informality governed by definite rules of conduct. Classrooms operate on the same basis of benevolent dictatorship. Activities are varied, and considerable effort is made to set up situations in which the child can successfully accomplish the tasks set for him—this in order that he should not become conditioned to failure. A well-rounded program of nonacademic activities is an important part of the school curriculum, and each student is required to participate in the arts and crafts, music, physical education, and athletics so that he will be conditioned to the finer things of life and to health-developing behavior. Perfection of form in the fine arts and literature is

stressed, as the pupils must not be conditioned to the imperfect.

Mr. Jensen's concept of the nature of learning differs basically from that of Mr. Wilson, particularly in regard to pupil activeness in the learning situation. Mr. Jensen would agree that a pupil's behavior is determined to a marked degree by his physical and social environment, but he would argue that the learner is not entirely a passive organism, becoming exactly what that environment predestines him to be. The pupil, he believes, is a goal-seeking organism capable of entering into the planning of his own activities and capable of purposefully affecting his own growth. He needn't be entirely a creature of his environment; he may even develop behavior patterns in spite of rather than because of the environment, provided he is guided to an acceptance of goals which he considers to be to his own best interests.

Consequently, in Mr. Jensen's school the general administration as well as classroom organization is essentially democratic in character, with the children entering actively into the planning of all phases of endeavor. Halls and classrooms are reasonably orderly, because the pupils believe such orderliness is a desirable form of behavior and essential to the attainment of their purposes in school. There is stress on the creative aspects of literature and the arts and crafts, with much less concern about immediate perfection of form. Mr. Jensen and his staff believe that the latter will develop with increased maturity and experience. The faculty of the school function more in the capacity of leaders than directors of student activity, with the pupils entering into the planning of all their school experiences. Considerable stress is placed upon the planning process on the assumption that learning situations are much more effective if the pupil understands the aims of these experiences and has set or accepted them as his goals.

2. Miss Brown and Mrs. Sweeney are first-grade teachers in rural consolidated schools. Miss Brown has been teaching in the community for a number of years and has been rather negligent in her professional study. Her concepts of psychology date back to the days when the accepted laws of learning were those of exercise, readiness, intensity, satisfaction and dissatisfaction, and other

concepts based on the old synaptic resistance theory. To her the learning of reading is primarily a drill process, supplemented by intensity of stimulus and the connection of satisfaction with proper responses and dissatisfaction with unsatisfactory responses. She believes, as do many other teachers today, that the early years of school are the so-called "drill ages," and that the fundamentals of reading, writing, spelling, and arithmetic must be mastered during these years, and through incessant practice.

Consequently, word drill in reading and flash-card drill on the essential combinations of arithmetic make up much of the work of the day, with stories, games, and singing thrown in to give variety and to keep the children from getting too restless. The winning of gold stars for high performance is stressed, and the grades to go on the six-week report cards are rewards for good work and punishments for the laggards.

Mrs. Sweeney probably could not quote the "law of exercise" if she were asked to do so, nor does she accept it as the basis of learning. If you ask her about the psychology of learning she will tell you that learning to read is very intimately related to the maturational levels of the children, that the children learn much more rapidly if the learning situations are meaningful to them, and that when the children are guided into situations where conceptual learning takes place, the amount of drill essential to the necessary efficiency of response is very much lessened. Take arithmetic, for instance: if a child has developed concepts of "threeness," "fiveness," and "eightness" through broad experience with them in concrete form, and if he has developed a concept of addition, he will understand that if $5 + 3 = 8$, then $3 + 5 = 8$. It then becomes unnecessary to practice on these as though they were entirely different combinations, each to be learned through drill by connecting the proper response to the given stimulus. The child, under conceptual learning, develops the ability to generalize and is able by reason of his insight into the learning situation to take many short cuts that were not at all possible under the "drill method" of teaching arithmetic.

In Mrs. Sweeney's first-grade room, consequently, you will find the children spending a considerable amount of the day in social living activities, planned and guided to develop conceptual learning. These activities are selected not only from the field of mathematics, but also from the areas normally termed science, social studies, music, and the arts and crafts.

Considerable practice in the "fundamentals," she realizes, is necessary, but most of this will come later in the school period, particularly in arithmetic, spelling, and writing.

3. Mr. Jones and Mr. Williams teach general science in the high school of a small city. Among the entering freshmen are several overage pupils who have been retarded in the elementary schools and have developed into minor problem cases. One of the boys, Harry by name, finds himself assigned to Mr. Jones's section. Albert is assigned to Mr. Williams's class. Within a matter of days both boys begin creating disturbances in class and are experimenting to see just how far they can go in the new school situations. Mr. Jones believes firmly that strict discipline must be maintained. He warns Harry that he will not tolerate breaches of proper conduct within the classroom. Upon the second offense, Harry is summarily dismissed from class and told that he will be required to remain after school for forty-five minutes to make up the class missed. As Harry is turning out for football and is very anxious to make the team, he decides that crime does not pay—at least, not in Mr. Jones's class. For the balance of the year he confines his mischief to other teachers who aren't quite such strict disciplinarians.

Mr. Williams has a somewhat different concept of the causes and remedies for infractions of school discipline. He believes that pupils behave as they do because of inner drives directed into behavior patterns that result in satisfying certain of their needs. Whether this behavior is considered desirable or undesirable from the teacher's point of view is largely irrelevant. The problem is to find out why the pupil behaves as he does and to attempt to remedy the cause when that behavior is socially undesirable. Conse-

quently, he studies Albert's past school records and learns what he can of the boy's home environment and his special interests and abilities. He comes to the conclusion that throughout school Albert has found himself in situations in which he was unable to achieve success because of his comparatively low academic ability. He reasons that Albert has turned to teacher-baiting as a means of gaining the attention of his classmates and of building up his social prestige. From these conclusions as to causal factors, Mr. Williams lays out his plan of attack. He has learned through his study of Albert's elementary-school records that the boy has a measured reading ability equal to that of a seventh-grade pupil at the beginning of the year. Through informal talks with Albert he has discovered that the boy lives out of town and expects to farm for a living. Mr. Williams's plan is to utilize every opportunity to get Albert interested in the application of science to agriculture, and to make available reading materials of a low level of difficulty which he can read with understanding. He encourages the boy to undertake various experiments, both in and out of class, so that he will not be so dependent on his reading ability alone to gain a knowledge of the workings of science. Ultimately, Albert ceases to be a disciplinary problem in the science class because he has found other ways of achieving success and maintaining his prestige in the group.

Numerous further illustrations could be given to demonstrate the manner in which the whole educational process, from the teaching of an individual subject to the organization of the whole school, is affected by the particular psychological concepts which teachers accept and put into practice. Much of the present controversy between the "essentialists" and the "progressives" in education stems from differences in their concepts of the nature of the learner and the learning situation.

It is the authors' purpose, in the remaining chapters of this book, to discuss what seem to be the most acceptable psychological principles—acceptable by reason of their soundness—and to call attention to their implications for classroom teaching.

CHAPTER II

Organic Bases of Activity

PROBLEMS

1. What are some of the more important factors that operate to determine an individual's resultant behavior in a stimulating situation?

2. In what way is the S→R formula inadequate to explain the resultant behavior of an organism in a stimulating situation?

3. Under what conditions does a situation become a stimulating situation?

4. What are the principal organic needs of the organism? What are the sources of energy required by the organism in the satisfaction of organic needs?

5. To what extent does the human organism depend upon learned and unlearned behavior in the satisfaction of organic needs?

6. What are some of the general behavior characteristics of an individual in a stimulating situation possessing novel elements? What is the relationship of past experiences to behavior in any given situation?

7. Under what conditions is an experience "educative"?

8. What is the relationship of "goals" to the activity of the organism?

DISCUSSION

The Nature of Organic Activity

Living organisms, under suitable conditions, may be stimulated to activities of various sorts. The problem of education is to discover the conditions which are favorable and the types of stimulation which are adequate to bring about responses which are considered desirable. This requires understanding of how the behavior of an individual is affected by the situation in which he is placed.

When external forces are applied to an organism, its resulting behavior is determined not by its structural form alone. The organism's biological condition and its physiological functions are primary factors in determining the nature and the intensity of the reaction which follows. The dish of ice cream that stimulates the hungry child to a vigorous attack may be of no interest to or may even cause repulsion in the satiated or nauseated youngster. Furthermore, the initiative for a reaction may consist chiefly of an intraorganic condition or event, so that external stimulation and extraorganic forces are not necessarily involved. The boy who has just received a thrashing at the hands of a stronger adversary may kick the stray dog that follows him rather than pet him as he ordinarily would do.

While it is possible to calculate exactly the distance that a stone of a given weight and size will travel through a medium of known density when a force of measured intensity is applied to it, no such exact prediction can possibly be made of the achievement of a child of known physical and mental characteristics when taught a certain subject by a given teacher. The explanation of this difference lies in the fact that (1) the actual nature of a stimulus is not determined by the external forces, but rather by the effects which

they produce in the individual, and (2) multitudinous other forms of stimulation, of both external and internal origin, affect the organism antecedently and simultaneously, so that the resulting behavior is a total response to the complex situation in which the organism finds itself rather than an isolated reaction to an isolated stimulus.

Of primary importance in a learning situation is the response of the learner, not what the teacher says and does. This response is determined by the pupil's attitude toward the teacher and the subject; is based on his previous experiences; and is modified by his readiness to participate in the proceedings and by his willingness to forget, for the time being, that the circus is coming to town tomorrow or that he has a date at the swimming hole after school. The effectiveness of a given learning situation depends on the degree of success with which it competes with other interests of the moment.

A stimulus is a force, activity, or condition which *affects* the living organism. Any situation which is not so related to the organism does not constitute a stimulus. Thus, a vibration produced by a musical instrument is a stimulus when it is responded to by a sense organ and so transformed into a sound. Vibrations which are not perceptible, either as sound or in some other manner, are not stimuli. It is, therefore, possible for the same event to be a stimulus in its relation to one organism but not to another. There is on the market an "inaudible" dog whistle which sets up vibrations too rapid for the human ear to perceive, but clearly audible to the dog whose auditory apparatus is sensitive to higher frequencies than ours. There is no inconsistency in saying that these vibrations constitute auditory stimuli for the dog but not for human beings. In a similar manner, vibrations produced by broadcasting stations constitute auditory stimuli only for one provided with a suitable mechanism to transform them into sound waves, namely, a receiving set, and with suitable auditory apparatus as well. Without these, such vibrations fail to affect the organism and hence are not stimuli. Finally, the proverbial tree

falling in the forest can do no more than produce vibrations which, if they reach a responding mechanism sensitive to that particular vibration rate, are transformed into auditory sensations. In themselves, these waves constitute *sound* no more than do those emanating from the dog whistle or the radio station; they are *potential* sound stimuli, depending on a suitable responding mechanism to become actual sounds.

It should be remembered that the auditory apparatus is not the only one which can respond to sound waves; vibrations of very low frequency, such as those produced by the lower register of a pipe organ, can affect the organism in other ways, principally through the skin senses. The essential criterion is that the organism must make some kind of response and alter its ongoing activity in some respect before a situation can properly be identified as a stimulus. It should be remembered that the individual may not at the time be consciously aware of being stimulated. The effect may become noticeable in his behavior or attitude at some future time rather than immediately.

In order to determine the nature of a stimulus, therefore, it is essential that its *effects* be known. There is relatively little connection between the physical force required to produce a situation and its effect on the organism. A shouted command or a loud explosion may cause no change in the behavior or the attitude of an individual who has steeled himself to ignore it; yet the same person may be stirred to considerable activity or emotion by a whispered word or by a familiar melody played by the strings of a distant orchestra. The intensity of external forces tells us nothing concerning their stimulating power, but knowing their meaning for the organism, on the basis of a knowledge of that organism's previous experience and antecedent responses to similar situations, enables us to predict their likely effects with considerable confidence—subject, however, to certain limitations.

The effect of a stimulus also depends on the conditions prevailing in the organism before and during the time of its effectiveness. The effect of the sound of a dinner bell on a person who has not re-

ceived food for some time while being engaged in strenuous manual labor differs greatly from its effect on one who has just arisen from the dinner table. This is true even though the sound has acquired practically the same meaning for both individuals by reason of previous experiences in which it has become associated with the feeding situation. The effect of a stimulus is thus further determined by the context in which it presents itself, and can be understood and predicted only if the total situation is taken into consideration. The individual does not react to the sound of the bell as an isolated event, but to a situation consisting of his condition of hunger or satiation and his physical well-being, in which the sound constitutes a symbol for the availability of food and thus for the possible relief of an undesirable state. Of course, the matter may be much more complicated than that. Together with the dinner bell there may be the sound of a fire engine—or the stimulation provided by the task upon which the person is engaged may well compete with the sound of the bell so successfully that the organism is oblivious to the latter. Many a boy has failed to hear his mother's call to dinner and ignored his own hunger pangs in the heat of a sand-lot game.

No reliable predictions are possible regarding an organism's probable response to a given situation unless its stimulus value for that organism is known and the total external and intraorganic situations in which it is presented are understood.

The general public, many teachers, and not a few psychologists have chosen to disregard this essential fact and often have assumed that living organisms can be made to respond in a manner similar to inorganic matter. Parents often have asked the advice of their neighbors or have consulted books written by "child experts" to determine what could be done with their children to bring about certain specific results. They usually have been disappointed to find that their child did not respond to the treatment "the way he should"—that his behavior depended on something besides the application of a technique which apparently had been successful when used with other children. Teachers have been concerned

because their method of presenting the subject matter under discussion did not get across equally well with all pupils, or even with those of equal measured learning ability. Some psychologists, haunted by the desire to make their new science respectable in the eyes of their academic colleagues, have attempted to reduce the whole of behavior to a simple objective formula, "stimulus-response," with complete disregard for that all-important factor, the condition and functioning of the stimulated and responding organism.

The results of this state of affairs are obvious in the vast array of antequated folklore concerned with methods of raising children; in a stereotyped curriculum consisting of required courses in "basic" and "cultural" subjects, and in naive psychological systems viewing the child as a blank nonentity, helplessly at the mercy of a mechanistic universe.

The living organism, of course, is not simply a structural unit waiting to be forced into some sort of response by whatever adequate stimulus happens along. Rather is it a functioning, active whole whose ongoing behavior is modified in both intensity and kind by the proper form of external or internal stimulation. It should be emphasized that a stimulus never *initiates* behavior; it merely serves to *modify* behavior that is continuously under way. Biologically speaking, living matter is in an unceasing state of activity which terminates only at death. It is probable that the same is true psychologically and that mental activities during unconscious states continue in somewhat modified forms rather than cease altogether. The causes of this continuous activity, the forms which it may take, and the means whereby it is sustained need consideration.

Organic Needs

The fundamental process of life is continuous modification to ensure self-maintenance, and for this the organism requires energy. Various mechanisms within the body collaborate in assembling, converting, and conveying substances providing food for energy.

The raw materials for this energy are supplied by nourishment and oxygen. After being absorbed by the organism, alimentary substances are transformed into combustible particles which undergo a process of oxidation when brought into contact with oxygen. The liver produces glycogen, which, after being converted into glucose, is circulated by the blood stream and absorbed by the cells to be stored for fuel. When cells become active, oxygen carried from the lungs by the red blood corpuscles causes the supply of glucose to be oxidized. In this process, heat is produced (calories), which enables the muscles to contract. Some calories are absorbed by this activity, and others are radiated in the form of heat. The products of combustion, water and carbon dioxide, are carried away by the blood stream—the former to be delivered to the kidneys, the latter to the lungs, from which it is exhaled. This is the process of metabolism.

It should be noted that potential energy may be stored up in the muscles and in the liver. This makes the organism relatively independent of the food which it is now assimilating and permits it to draw upon stored reserves, thus ensuring regularity of energy expenditure. Food consumed in excess of that required is stored as fat and may be drawn upon when outside nourishment is not obtainable.

The amount of glucose released into the blood stream largely determines the quantity of available energy. The rate of secretion is in turn regulated by the intricate system of chemical balance of the organism. This balance is maintained by the coordination of the activities of the endocrine glands, each secreting its specific substance (*hormone*) into the blood stream. These chemicals produce definite modifications in the normal growth and functions of the body if present in the blood stream in unusual quantity. Some of these effects will be discussed in detail in a later chapter; in the present connection, attention will be given only to the function of one of these glandular secretions, adrenin. Secreted by the adrenal medulla, this chemical produces significant effects throughout the organism. When released in more than normal

quantity it speeds up the heartbeat, increases blood pressure, opens the sweat glands, terminates digestive processes, and releases glucose from the liver. If the adrenal medulla secretes at an unusually slow rate, the organic effects are reversed.

Under normal conditions, and in a healthy organism, the production of glucose is so regulated as to counterbalance the energy output and to maintain the chemical balance which is characteristic of that particular organism. When unusual demands are made on the individual, requiring drastic readjustment rather than smoothly functioning habitual behavior, the chemical equilibrium is upset by an excessive flow of adrenin. This brings about the physiological results mentioned above, which in turn provide the organism with excessive amounts of potential energy, carrying with it the experience of an emotion. The individual consequently becomes capable of unusual energy expenditure without a feeling of undue fatigue and often can perform feats of strength of which he would be quite incapable in the absence of this physiological adjustment.

To maintain its customary level of energy production and its normal rate of growth, the organism requires an adequate solid and liquid diet and adequate relaxation. In the absence of these fundamental organic needs, cell building and energy building cannot proceed; the organism cannot maintain itself in proper functioning condition, nor can it provide for its other needs because of lack of energy. In contrast to some mechanical heat engines, the organism requires a very special kind of fuel: food which the cells can assimilate and convert in a definite manner. Most other kinds of materials are rejected as inedible. Furthermore, these combustible particles are not turned into energy-providing calories rapidly, but by a slow process of oxidation at low temperature. This process is interfered with when the temperature becomes excessively high or low. Hence, to the three basic organic needs, food, moisture, and oxygen, should be added a fourth: temperature.

It is well known that different foods vary greatly in calorific con-

tent. This means that the amount of energy to be derived from nourishment depends not on the *quantity* of food consumed, but rather on its *type*. Proper balance of the basic nutrients—carbohydrates, fats, and proteins—is essential for the maintenance of the bodily structure as well as for the provision of energy. Obviously, the proportions vary according to individual needs and conditions, principally determined by (1) the body mass, (2) external environment, and (3) amount of activity.

The body mass is affected by a variety of conditions, including hereditary structure, sex, and age. The amount of nourishment required to build up body tissue is, of course, proportionally greater in childhood than in adulthood, as in the latter case its function is to rebuild wasted cells rather than provide for their further growth. Hence, food rations at an early age should be superabundant in comparison with later requirements, when mere maintenance is sufficient. Disproportionate nutriments assimilated by the organism may result in the accumulation of excessive reserves, so that the individual gains weight. Deficiencies in the supply of essential foodstuffs may cause a person to lose weight, because his existing reserves have to make up the deficit.

With a change in external temperature the organism needs to alter its production rate of calories in order to maintain its own optimal temperature. When placed in a colder-than-normal medium the cutaneous surface of the body radiates more heat, thereby reducing the internal temperature. To compensate for this loss, more calories must be produced. This accounts for the fact that dietary differences exist among inhabitants of various temperature zones as well as between the winter and summer rations of each group.

Even when not engaged in muscular activity of an overt nature, an organism's processes of digestion, respiration, and circulation continue, so that a certain minimum amount of energy always must be available for these functions and for the maintenance of temperature. This "static expenditure" of energy consumes, of course, less fuel than does the "dynamic expenditure" involved in work

and other overt activities. The dietary requirements of an individual vary, therefore, with the amount and intensity of the activities in which he engages. A growing organism normally is an excessively active organism; consequently, enough foodstuffs must be available not only for cell building, but also to enable it to engage in the amount and type of activity required to provide experience in the exercise of its developing bodily functions.

Organic growth and bodily functions are influenced directly by various forms of vitamins contained in food. Evidence points to the fact that a diet lacking in certain vitamins causes stunted growth of parts or all of the organism and affects the metabolism in such a way that normal functioning becomes impossible. Though remarkable results have been obtained in clinical cases by regulating the vitamin content of food, the precise physiological effects still are largely a matter of conjecture and speculation. No attempt will be made here to present the many conflicting claims made for the effectiveness of certain vitamins, but their significance in a balanced, adequate diet should not be overlooked.

Calories cannot be derived from all foods because some foods do not contain the elements from which combustible particles can be derived, but act, rather, upon muscle and nerve fibers directly. Their effects are noticeable in a reduction or intensification of energy expenditure; many of them are of a toxic character which is reducible as a result of habituation. Drugs of various kinds are included in this group. Although these substances are not in a real sense of the word foodstuffs, they nevertheless have a considerable effect on the individual's capacity to perform by counteracting feelings of fatigue or creating a feeling of exhilaration which causes him to remain active longer than would otherwise be possible. Other drugs have the opposite effect and result in a feeling of lethargy or produce pronounced muscular relaxation, so that any expenditure of energy seems exercise.

It should be noted that the means of satisfying the basic needs for self-maintenance—food, drink, and rest—must be learned anew

by each generation and each individual. Some psychologists have made much of instincts as determinants of behavior, but the fact of the matter is that, while a heightened metabolism of the body results in a general state of restlessness in a newborn organism, it does not lead to specific forms of behavior aimed at satisfying the specific tissue need. Unquestionably, the existence of such a need leads to heightened activity, but the *direction* of that activity is not determined by the existing conditions. Thus, the young infant when hungry becomes excessively active and restless, but has no means of directing that activity toward food-seeking. When the source of food in the form of the nipple is introduced between the hungry infant's lips, sucking movements do not usually follow unless the child has been previously trained to respond in this manner. Even in the most elemental life situations the inexperienced organism is incapable of making adequate adjustments, though the necessary energy for such behavior is provided by drives, which are essentially tissue needs.

There are certain fundamental activities which are displayed provided the proper conditions for their performance exist, but even these reactions are subject to modification as a result of experience. Their first occurrence depends upon (1) adequate structural development and (2) opportunity for functioning. Breathing, for example, presupposes the necessary mechanism as well as the presence of air. When either of these factors is absent, the behavior pattern is not displayed. There seems to be little necessity for introducing the concept of "instinct" in this connection, because it carries with it the connotation of an inherited predisposition to react in a given, well-determined fashion in a specific situation. The phenomenon seems to involve no more than the presence of a structure organized in such a manner that it is responsive to a particular form of stimulation. When that form of stimulation presents itself, the reaction of the structure is not brought about by an inherent response tendency so much as by the nature of its own peculiar construction. When a drop of ink

is spilled on blotting paper we do not speak of an instinctive tendency on the part of the paper to absorb the ink particles, but we recognize that the peculiar construction of a blotter is responsible for the absorption phenomenon. When air fills the lungs, there is nothing for the red blood cells to do but to absorb oxygen and carry it with them through the blood stream. Similarly, when carbon dioxide is returned, the lungs have no choice but to eliminate it by exhalation. Such is their peculiar structure, distinguishing lungs from other parts of the organism. They are destined by their very structure to perform as they do, even as rods of the eyes are destined (that is, constructed) to be sensitive to light rays.

The lungs, heart, and other organs must remain active regardless of any other activity in which the individual may engage, consequently the structure necessary for their adequate functioning includes the autonomic nervous system, which controls the maintenance functions of the body. Its significance in connection with the regulation of glandular and other physiological functions will be discussed later.

The heightened vitality characteristic of an existing need makes available more energy to be used in muscular reactions. Unless and until adequate outlets are developed for this additional energy, the individual displays more vigorous random reactions, which are in no way related to the removal of the disturbing situations or the attaining of a desirable goal. An infant whose quiescent state has been disturbed by an organic condition engages in random excessive movements, most of which do not result in restoring his equilibrium. When the same situation recurs repeatedly, he learns by experiencing to single out from these mass movements those which will serve his particular purpose; these are referred to as *adjustive* or *adequate* responses.

The primary source of energy is thus found in organic conditions—the metabolism of the body, which varies with the organism's state of satiation or depletion and is subjected to regulation by glandular secretions.

Learning to Satisfy Needs

Behavior resulting from energy released by basic needs is at first of a general nature, not directed at the satisfaction of those needs. Gradually, through repeated experiencing, the child develops the ability to respond specifically in each situation and to satisfy each need to the best of his ability.

This implies that the child deals with repeatedly presented situations in the light of his previous experiences under similar conditions. Behavior forms which in the past have proved successful in bringing about desired consequences or removing undesired situations are repeated when the occasion arises. Typically, such adequate solutions at first are the result of accidental discovery in the course of a display of all or a large part of the child's repertory of random movements, such as the lip movements causing a flow of milk from the bottle, coincidental to a number of unselected behavior forms not adapted to the removal of his hunger drive. However, this one reaction bringing about the desired result involves the satisfaction of a felt need and thus stands out as being adequate in that particular situation. With each recurrence this successful reaction is again experienced as being peculiarly satisfying, and is gradually selected to the exclusion of all other responses as peculiarly fitting this special occasion. We then say that a *habit* has been built up which makes it unnecessary for the child to experiment further and supplies him with an appropriate manner of reacting in a given situation.

It often has been overlooked that subsequent presentations of a stimulus do not constitute situations identical with the original. The second time a bottle is offered the relationship is no longer, as it was the first time, between an unknown object and an inexperienced infant, but rather between a previously experienced object and an infant having displayed certain reactions toward it. With each recurrence the situation becomes different in that the object contains fewer and fewer novel elements and the child accumulates more and more significant experiences in connection

with it. Familiarity with a situation involves more than mere recognition of its objective elements. Through earlier experiencing certain relationships and meanings have become established. If on first acquaintance the bottle is an object of given vague dimensions, color, temperature, and odor, presented during a period of disequilibrium caused by hunger, it rapidly acquires a very different aspect as a means whereby this disturbed state can be alleviated and a basic need satisfied. From an independent, unrelated experience occurring in a certain context, it develops into a meaningful concept after its significance has been established by experience and it has acquired a definite stimulus value. Differential behavior displayed toward the bottle with increasing experience does not involve behavioral modification toward the *same* object, but rather is a series of reactions to constantly changing situations whose communality lies in the objective identity of the bottle rather than in the child-bottle relationship.

Learning to satisfy a need necessarily presupposes an understanding of how the available means are related to the existing tissue condition. Only through experience does the child discover this connection and, for instance, learn to display differential behavior when hungry toward known edible objects and those not experienced before. The satisfactions derived from earlier contacts serve as a guide to future behavior. There is evidence to show that even young infants are capable of selecting the kind and amount of food which they require. This strongly suggests that hunger is not a single drive, but a composite of specific appetites which, occuring alone or in any given combination, require specific satisfactions before the organic equilibrium can be restored.

Psychologically even more important is the fact that children who are given the opportunity to select their own food display an obviously favorable attitude in the feeding situation and present none of the feeding problems so frequently found among those whose diet and manner of eating have been prescribed for them. Here, as in other types of learning, the total situation in which the experience occurs should be considered rather than the isolated

stimulation presented to the child. Feeding problems arise not so much because of the nature of the food as because of the circumstances under which it is being obtained. Too frequent feeding and standardized formulae violate the principle that adequate behavior results only when the need is apparent to the individual. The child who is forced to eat when not hungry or is given food for which he has no appetite, inevitably develops an antagonistic attitude toward food and the eating process. Display of authority on the part of parents is wholly unnecessary if the child's condition and needs are considered paramount in determining when, what, and how much he is fed.

An antagonistic attitude may result from extraneous factors as well. When the individual is emotionally disturbed for one reason or another, he should not be expected to be interested in food. Aside from the physiological fact that a stirred-up organism is in no condition to digest and assimilate food, there is the psychological objection that the unfavorable attitude is likely to be transferred from whatever may have caused it to the feeding process. Again, too many obstacles may have been placed in the way of the child's satisfaction in the form of insistence on table manners and similar rituals, with the result that his resentment to what are to him needless hurdles becomes attached to the food itself.

The origin of feeding problems illustrates clearly that desirable behavior can develop only if it is behavior related to an experienced need and that the entire situation in which the means for its satisfaction are presented influences the establishment of subsequent behavior patterns.

Not every situation requires extensive experimentation on the part of the child, even when it presents itself for the first time. Certain stimuli affect his organic well-being so directly that an adequate reaction follows without preliminary experience. Such behavior forms do not imply the acquisition of ready-made reaction patterns through hereditary channels, as is sometimes assumed, but, rather, a peculiarity of the organic structure which, under the circumstances, necessitates a specific type of reaction. Thus,

tickling the mucous membrane of the nose or throat results in sneezing and coughing, respectively; a bright light shining into the pupillary opening results in an expansion of the iris; and a filling-up of the mouth with liquid results in swallowing.

Anatomically, a simple *reflex* results from the conjunction of the afferent and efferent neurons involved. Since nerve currents follow lines of least resistance, the continuity of sensory and motor tracts provides the basic determining factor of a reflex. All that is required to elicit a reflexive response is an appropriate stimulus of a certain minimum intensity (threshold) and the absence of a conflicting stimulation which might interfere with the performance of that reaction. The appropriateness of a stimulus is determined by its relationship to the responding sense organ: a bright light serves to elicit a reflex response in the eye, but is not appropriate when applied to other receptors. There is a growing body of evidence that, within the nervous system, the propagation of an impulse, though principally dependent upon anatomical proximity, is influenced by the *chronaxie* of the fibers involved. This means that each unit in the reflex arc responds more readily when the stimuli applied to it have the same temporal course (vibration rate) that is characteristic of that unit.

Obviously, the intensity of the stimulus must be equal to or exceed the threshold of sensitivity of the organ to which it is applied, but this effect may result from a summation of repeatedly presented inadequate stimuli. Each of these is by itself inadequate to bring about the response, but together they may be effective. A sound wave of submarginal intensity may be repeated or simultaneously presented by different sources and thus become audible. Slight pressure on the skin, applied regularly to the same spot, becomes sensible after a number of repetitions.

Rarely does a stimulus affect the organism in such a way that only a single isolated response pattern is aroused. This implies that, normally, the above considerations are inadequate to explain the resulting reaction and that the interaction between different reflexes must be taken into consideration. This interaction

may result from either a combination of reflex tendencies or opposition between them. In general, reflexes involving the same motor apparatus in the same manner are combined so as to reinforce each other, while those which do not use the same efferent pathway occur simultaneously without reinforcing or interfering. In those instances in which the same effector is involved in different ways, a conflict arises from the physical impossibility of responding in opposite manner with the same motor apparatus. As to the factors which determine the resulting behavior in a case of conflict between reflexive tendencies, there are four possibilities: (1) conflicting reflexes may be reinforced by related reflexes, (2) a reflex tendency becomes stronger when the force which has inhibited it is removed, (3) a continuously repeated reflex shows evidence of fatigue and is thus more readily overcome by another, and (4) reflexes which are prepotent in intensity have the right of way over others.

This last factor is most important from the psychological point of view. It means that reflex-evoking stimuli which lead to strongly affective consequences, either extremely pleasant or extremely unpleasant, tend to affect the organism more intensely than do stimuli which do not involve emotional reactions.

Though reflexive reactions are typically displayed by all normal infants, they are not present in such a perfected state that experience does not modify them, nor are they so static that the maturational process does not affect them. As a result of repeated presentation of the same stimuli, behavior may develop which is an intensification or perfection of the original reaction, and under certain conditions the individual may become able to control or inhibit his initial mode of responding. The reflexive closing of the child's fingers around an object touching the palm of his hand is a universal response in early infancy, but normally disappears with increasing maturity. For obvious reasons the importance of reflexes to the educative process is not as great as that of habits, because the range of their modifiability is distinctly limited.

Meeting New Situations

To the extent that the experiences of the individual are limited to situations which either affect his tissues so immediately that his reflexive behavior is adequate to deal with them, or have been dealt with before so that he has developed habitual modes of responding to them, there is little need for his developing techniques of evaluating problematical conditions and of making novel adjustments. Much of the child's daily routine consists of familiar situations, but each day also brings problems, difficulties, and alternatives not encountered before. In such cases the entire process whereby the infant first learned to satisfy his recurring needs is called into play again. The occurrence of an obstacle in the form of a novel situation with which no habitual mode of reaction can deal adequately results in a display of random, diffuse responses, one or more of which may enable the individual to overcome the difficulty. Sometimes this series of reactions may consist of actual overt muscular movements; at other times symbolic responses are called forth and the organism attempts to circumvent the obstacle by the use of ideational images. The distinction is one of emphasis rather than kind; both are attempts to "do something about" the problem; both result in success or failure, and both involve neuromuscular responses. In either case, whether the solution is arrived at as a result of "thinking" or of overt behavior, it is preceded by a process of random exploration.

It should be noted, however, that the chance element in the solution is proportional to the novelty of the situation. If the situation be a *completely* novel one, containing no known elements of any sort, there would be no past experiences on which to draw, and the child would have to depend entirely on chance behavior. Such would be the case if he were shown an object not resembling anything experienced before in appearance, smell, or texture. He could only guess, for instance, whether or not this object would be good to eat. However, such instances are rare, and most situations contain known as well as unknown elements. To the extent

that previous experiences can be drawn upon to solve familiar aspects of the problem, the solution loses its chance characteristic and the child can depend on established modes of response.

A child reacts to the novelty of a problem consisting of new as well as known elements by combining in a new way established responses to familiar elements in the situation and selecting new responses to its novel features. This in no way contradicts the previous statement that responses are integrated behavior patterns, since the individuality of the various reactions is submerged in their total configuration. A child confronted with a situation which is new to him hesitates before displaying overt reactions designed to master it. This hesitation enables him to observe more carefully, to recognize certain familiar aspects, and to analyze just what is novel in the situation. Restraining overt activity is characteristic of a thoughtful approach and occurs typically when habitual or reflexive patterns are inadequate. Similarities and discrepancies are noted, comparisons and contrasts observed, and action withheld until a better grasp of the situation has been obtained. Of course, it is easily possible that the net result of this process will be unsatisfactory because the child does not have an experiential background wide and varied enough to enable him to judge the situation correctly. Superficial similarities between the new and the familiar may be overestimated and their discrepancies overlooked. With increasing maturity and widening experiences such misinterpretations tend to become less frequent, but in early life they lead to numerous inadequate responses. The infant responds to a cloth dampened with warm milk in the same manner as to the nipple because the tactual and olfactory stimuli derived from both are the same. Differences are ignored because observational ability has not been sufficiently developed by experience. After acquiring more experiences, his discrimination becomes more acute and differential behavior is displayed toward dissimilar situations, regardless of the identical elements involved.

It is worthy of note that an attempt to overcome a novel difficulty will occur only if sufficient organic energy is available to make the

effort and the organism actually experiences a need; otherwise an unknown problem will result simply in the cessation of energy expenditure or in directing it away from the new stimulus. If a child is completely satiated there is little likelihood that he will attempt to eat a novel object as he undoubtedly will do if hungry. In the former case, he is more likely to remain passive, direct his attention toward other matters in the environment, possibly play with the object rather than try to eat it, or experience actual repulsion rather than attraction.

It follows that a situation, in order to be educative, that is, result in more adequate or more complex behavior, must (1) be related to the child's felt needs so that he will make the effort to deal with it, (2) contain sufficient familiar material to ensure that his response will not be of the hit-or-miss variety, but, rather, involve elements of previously acquired successful responses, and (3) provide a challenge to his ingenuity in the form of previously unexperienced (novel) elements with which he will have to deal experimentally. Only if these conditions are fulfilled can we speak of an experience as a truly educational one.

SELF-EVALUATION EXERCISE

Directions: The items below relate to the discussion of organic bases of activity. Each item consists of a statement of a problem or a psychological fact requiring completion by the selection of one of the three possible phrases, clauses, or sentences listed as *a, b,* or *c.* Read each item carefully, then do the following:

1. Select the phrase, clause, or sentence which best completes the statement or which provides the best answer to the problem of the item concerned.
2. Write down the symbol of the "best answer" (*a, b,* or *c*) on a sheet of paper, together with your reasons for selection, for each item of the exercise. Tell why you believe the answer you selected to be better than the two you rejected.

The fact that one of the three possible answers to an item is con-

sidered to be the best answer does not mean that the other two necessarily are wrong or false. Such may be the case; however, it may be that the "best answer" merely is more nearly complete than either of the other two, or that it is more in harmony with modern psychological thought. Remember, don't search for "right" and "wrong" answers or completions to an item, but, rather, for the *best* one of the three possible choices.

1. Given a situation in which external forces are applied to an organism, the resultant behavior is determined—
   a. by a specific habitual reaction which has previously been learned by the organism.
   b. by the organism's biological condition and physiological functions.
   c. by a set response pattern over which the organism has no voluntary control.
2. Stimuli capable of affecting the behavior of an organism—
   a. may be intraorganic as well as extraorganic.
   b. practically always are extraorganic.
   c. practically always are intraorganic.
3. If you know a child's physical and mental characteristics—
   a. you can accurately predict the child's behavior in a given stimulating situation.
   b. you still cannot accurately predict resultant behavior in a given situation.
   c. you have absolutely no basis for making predictions of possible behavior.
4. A child's resultant behavior in a stimulating situation consists of—
   a. specific responses to specific stimuli, with the resultant behavior being a summation of all these specific responses to individual stimuli in the situation.
   b. a rather definite reaction pattern resulting from past conditioning.
   c. a total response to a total situation, antecedently as well as simultaneously.

5. The nature of a stimulus, so far as any given organism is concerned, is determined by—
   a. its effect upon the organism.
   b. the intensity of the stimulus.
   c. the physiological structure of the receiving organism.
6. A stimulus is considered to be—
   a. a force or condition which affects the living organism.
   b. any situation which may potentially affect the organism.
   c. any physical force, regardless of the presence of a receptive organism.
7. In order to predict resultant behavior with any degree of accuracy in a given situation—
   a. one must know the physiological structure of the receiving organism.
   b. one must know the intensity and direction of the stimulating forces in the situation, together with the physiological structure of the receiving organism.
   c. one must know the physiological condition of the organism at the time, as well as the meaning of the situation to the organism.
8. A particular stimulating situation—
   a. initiates a particular response in the light of past experience of the organism.
   b. initiates a response in direct ratio to its intensity.
   c. does not initiate behavior, but, rather, may affect ongoing behavior.
9. The basis of energy in a living organism is—
   a. adrenin and other glandular secretions.
   b. nourishment and oxygen.
   c. fat and carbon dioxide.
10. An oversecretion of adrenin results in—
   a. a slowing down of the bodily processes and the creation of a restful condition.
   b. a speeding up of the bodily processes, making ready for excessive activity.

c. no effect upon bodily processes, but does create feeling of an emotion.

11. An increased metabolic rate means that—
    a. energy within the organism is being released at an increased rate.
    b. the organism is chemically out of balance.
    c. the psychological processes are being speeded up.
12. Relatively speaking, the greatest amount of energy is required—
    a. during the growing period of the organism.
    b. during the adult period of the organism.
    c. at no particular period, but, rather, is determined entirely by the physical activity of the organism at the time.
13. Heightened metabolism in the newly born infant normally results in—
    a. instinctive behavior of a specific nature.
    b. a general state of restlessness.
    c. specific responses to specific stimuli.
14. So far as reflex behavior is concerned, it is conceived to be—
    a. an inborn reaction pattern called into action by a specific stimulus.
    b. a reaction learned through previous experience.
    c. a reaction resulting from a structure so organized that it is responsive to a particular form of stimulation.
15. Adjustive or so-called "adequate" responses—
    a. are instinctive and result from innate behavior patterns.
    b. are those singled out from random reactions because they satisfy the needs of the organism.
    c. are the trial-and-error attempts of the organism to find a solution to a problem.
16. George, an infant of two months of age, cries lustily whenever he wants to be picked up and fondled. The most acceptable explanation of this behavior is that—
    a. he has learned through past experience that crying gets desired results.

b. he has been conditioned to this behavior, so that he cannot react otherwise.

c. crying is the natural form of behavior when an infant wants attention.

17. Mary, a nine-month-old baby, is learning to walk and is making her seventh attempt in two days. On the last try she succeeded in taking four steps before falling.

a. Each new attempt is an experience practically identical with the others, each being primarily trial-and-error learning.

b. Each attempt is a new experience; it is modified by past experience so that it is not identical with the others.

c. There is learning only from the successful attempts; the unsuccessful attempts discourage learning.

18. George has lived in a large city during most of his three and one-half years of life. For the past month, however, he has been living with his grandparents on a farm. He still has considerable difficulty distinguishing chickens from ducks and from a distance is unable to tell horses from cattle. However, he can identify the cows properly when they are in the milking barn or when close enough for him to see the horns.

a. George's difficulty is most likely due to the fact that he still is unable to differentiate adequately. He still tends to react to the total pattern rather than to the differences in the parts.

b. His difficulty in identifying the animals correctly is a result of an inadequate number of repetitions of the names of each, so that the correct S→R bonds have not yet been formed.

c. His chief difficulty is due to the fact that he cannot yet integrate the various parts of the stimulating situation into proper wholes.

19. In regard to the modifiability of reflex reactions the more acceptable point of view today is that—

a. reflexes may not be modified by experience.

b. reflexes may be greatly modified by experience.

c. reflexes may be modified by experience, but to a very limited degree.

20. A child experiencing a felt need in a given situation encounters an obstacle which to him is novel. His most likely form of behavior would be—

a. to withdraw from the situation immediately.

b. to engage in complete trial-and-error reactions either until he was exhausted or until the obstacle was satisfactorily overcome by some one or more of his random reactions.

c. to attempt to bring to bear past experience to remove or overcome the obstacle; but, failing in this, to engage in random reactions in an attempt to circumvent or remove the obstacle.

21. In a learning situation in which there are novel elements—

a. the chance element in the solution is proportional to the novelty of the situation.

b. learning becomes almost entirely trial-and-error.

c. there is still little or no purely random reaction in the attempt to adjust to the situation.

22. Mary, aged three years and two months, was taken to the zoo, where she was especially thrilled by the lions. Next day, upon seeing a brown collie dog trotting down the street she ran to her mother crying, "Mother, come quick! See the lion!" The most acceptable psychological explanation of the incident is that—

a. Mary had noted similarities of pattern, but had not yet enough experience with lions and collies to become aware of differences. She actually thought she saw a lion.

b. Mary was aware of the fact that the dog was not a lion, but thought it would be a good joke to play on her mother, so she called her mother to "see the lion."

c. Mary was telling a fib, although she may not yet have learned the finer differences between "telling the truth" and "telling an untruth."

23. A novel situation, or element in a situation, which presents no obstacle to a goal—
    a. tends to awaken a curiosity in the learner, and challenges him to try to overcome the obstacle.
    b. tends to be ignored or avoided by the organism.
    c. cannot be considered to be a part of the stimulating situation unless it causes an overt reaction on the part of the organism.
24. To be considered an "educational experience" such experience should contain the following three elements—
    a. be related to felt needs; be abstract enough in its character to give the learner a good mental workout; consist chiefly of novel factors.
    b. contain enough familiar material so that pure trial-and-error learning may be eliminated; be related to a felt need of the learner; contain enough of the novel, combined with the known, to encourage experimental activity.
    c. be primarily a novel situation; be related to the needs of the learner so that it will challenge thinking; be of so difficult a nature that it will discipline the mind.

SUGGESTED READINGS

Bode, Boyd H.: *How We Learn,* D. C. Heath and Company, Boston, 1940.

Dewey, Evelyn: *Behavior Development in Infants,* Columbia University Press, New York, 1935.

Gesell, Arnold, *et al.: The First Five Years of Life,* Harper & Brothers, New York, 1940.

Hartmann, George W.: *Gestalt Psychology,* The Ronald Press Company, New York, 1935. Chaps. II–XIII.

Hilgard, Ernest R., and Donald G. Marquis: *Conditioning and Learning,* D. Appleton-Century Company, Inc., New York, 1940.

Judd, Charles H.: *Educational Psychology,* Houghton Mifflin Company, Boston, 1939. Chaps. I–IV.

Macy, Icie G.: *Nutrition and Chemical Growth in Childhood,* Charles C. Thomas, Publisher, Springfield, Ill., 1942.

National Society for the Study of Education: *Forty-first Yearbook,* Part II, "The Psychology of Learning," Public School Publishing Company, Bloomington, Ill., 1942. Chaps. I–VII.

———: *Forty-third Yearbook,* Part I, "Adolescence," Public School Publishing Company, Bloomington, Ill., 1944. Chaps. I–VII.

Pryor, Helen Brenton: *As the Child Grows,* Silver Burdett Company, New York, 1943.

Salisbury, Frank: *Human Development and Learning,* McGraw-Hill Book Company, Inc., New York, 1939. Chaps. IV–VI.

Troland, Leonard T.: *The Fundamentals of Human Motivation,* D. Van Nostrand Company, Inc., New York, 1928. Chaps. VI, VII.

Wheeler, Raymond H., and Francis T. Perkins: *Principles of Mental Development,* The Thomas Y. Crowell Company, New York, 1932. Chaps. II–VI.

CHAPTER III

Social Needs and Integration

PROBLEMS

1. What are the conditons under which the human organism will modify its behavior in seeking to satisfy its needs? What is the relationship of organic to social needs in the modification of behavior?

2. What are the conditions which determine whether or not certain conditions, peoples, or things are a part of an individual's environment? Explain the statement, "Environment is psychological rather than physical."

3. What are the basic social needs that must be satisfied if an individual is to maintain an adequate relationship with his environment?

4. What are the essentials of personal integration? What are the characteristics of a well-integrated personality? To what extent is integration a stable or a changing condition of a given organism? What is meant by integrative and disintegrative experiences?

5. In what way is the statement that "personality is the sum of a

person's traits" inadequate as a concept of personality? To what extent are personality characteristics relative in nature?

6. What is the essential difference between "motives" and "drives"?

7. What are the factors that cause several individuals to react differently to what apparently is the same stimulating situation for all?

8. Under what conditions may it be said that an organism is "experiencing"?

9. From a psychological point of view can you justify the contention that the school and community must function as a well-integrated whole if school education is to be very effective? Explain.

10. In what manner does the "expanding ego" result in a need for integration of biological and social functions?

11. Given a conflict between organic and social needs, what are the factors that will determine which will become dominant in determining the individual's behavior?

DISCUSSION

Responding to the Environment

In the preceding chapter it was shown that an organism produces within itself the energy required for its response to a stimulus situation, and that its response to such a situation is determined chiefly by organic functions and prior experience. It also was demonstrated that this basic energy in a novel situation finds an outlet in unspecific responses, but that gradually certain types of reaction are selected as being better suited to the satisfaction of the organism's needs. Thus, specific outlets are found for the energy provided by fundamental drives, and these outlets tend to become routinized into habit systems.

Now these habitual forms of behavior have been selected and continued because of their satisfyingness—their ability to meet that particular individual's needs in the apparently most adequate manner. These habitual behavior patterns are by no means to be thought of as the *only possible* means of serving that purpose. They may not even serve best that particular person's purposes, and he may have selected them merely because his range of experimentation and experience was so limited that they came nearest to satisfying his need. Given wider scope in meeting these situations, he might have developed a much more adequate set of responses. And it is entirely possible that, when his experience increases, he will discard these earlier behavior forms and adopt a new set which serves him better. Certainly such a process is at work in the feeding responses of the child, which change constantly with increasing maturity and experience. But, although such a change occurs generally, it is not to be expected that either the preliminary reactions or their subsequent modifications will follow the same pattern in all children. If this were the case, we would find that, given a certain tissue need like hunger, each child would respond in a similar or even identical manner under a given set of conditions. Individual differences in reactions to specific situations are the result of the wide variations in the make-up and environments of the various organisms.

It should be carefully noted that "environment" as a psychological term, and as used in this text, does not mean the people, furniture, climate, and other aspects of the world in which the individual lives per se, but, rather, the mutual relationships between him and various items of experience. Some social workers may be satisfied when they have listed the persons constituting the immediate family of their case; the psychologist, however, will want to know the child's relations with each of these people—how he affects them and how they affect him. He will want to see the child's family through the child's eyes. That this is essential if we are to understand the influence of environment upon individual development is borne out by the common observation that two children in

the same home rarely display identical reaction tendencies in their relations with a specific member of their family. The family does not represent the same environment to each of the two children because their experiences with its component members are not identical. Obviously, the environmental relations of the oldest child, essentially a dethroned only child, differ radically from those of the youngest child, who is considered inferior by older siblings and, possibly, by adults. The psychological environment certainly differs for the healthy child and his sick brother; the favorite girl and her unwanted sister. No two of the above pairs experience the objectively identical aspects of their environment in the same way; consequently, each child develops a way of dealing with his particular environment which promises to ensure him the greatest possible satisfactions.

Until and unless persons and objects enter into the child's life sphere by initiating or responding to a situation in which he is a partner, they do not constitute a part of his psychological environment. This generalization presupposes *contacts* in one form or another rather than mere *existence.* We are dealing, it should be remembered, with psychological concepts, which means that the individual is the center of reference throughout. A condition, person, or object forms part of the individual's psychological environment only when it influences him directly or indirectly, whether he is aware of it or not.

How this environment affects the person is, of course, dependent on a multitude of circumstances. His own physique, health, appearance, and vigor, together with his past experiences, determine to a considerable extent what these relationships will be. Whenever a change occurs in any of the above factors, there is a likelihood that his relations with his environment and thus his response tendencies will change accordingly. As a result of the removal of a tumor, or the correction of nearsightedness, the child is placed in a new relationship to his environment, even though the persons in it may not react in any noticeably different manner. Psychiatrists well know the beneficial effects of a permanent wave

upon the outlook of a female patient, and army officers are keenly aware that clean uniforms affect the morale of their men. Here is further evidence that the person-environment relationship cannot be gauged by a mere listing of individuals and items composing the environment. It is essentially a *mutual* relationship, and the nature of the child's contacts rather than that of the component parts of his environment determines his behavior tendencies and his social needs.

As the young child slowly becomes aware of the existence of a world around him which contains other organisms like himself, his needs gradually expand from being centered around the maintenance of his body metabolism to include the maintenance of social status. The position that he maintains, in his own estimation, in a group constituting his usual environment determines the social needs which he seeks to satisfy. Clearly, a change in environment involves a revised social status and necessitates a modification of social needs. Every social worker knows to what drastic extent the child's outlook may be readjusted after his transfer to a foster home.

Maintenance of social status implies that each child aspires to preserve a relationship with his environment in which he constitutes a fully accredited, accepted, and respected member. This involves, first, a sense of *security.* The child must feel that he can be sure of the affection, care, and protection which he needs so constantly if he is to develop normally. This fundamental need can be supplied in many ways and by many people, but somehow and from some source satisfaction must be available. Nor is this surprising; the world is full of forces that threaten the child's security from early infancy on, and unless he can find adequate defenses his very existence may well be threatened. When the firstborn child, secure in the feeling of being protected by the undivided love and attention of both parents, is told that a little sister has arrived in the home, he experiences a very real threat to his safety. Will his parents love the newcomer more than himself? Will Daddy still play with him when he comes home from work?

At best he knows that, for the first time in his life, he will have to get along with only part of the attention he used to get before the arrival of this intruder, and it takes considerable wishful thinking to imagine that he would welcome his little sister under these circumstances. She is, in every sense of the word, interfering with his life, his familiar world, and his pleasantly established family relationships, and thus is a real danger to his security.

Maintenance of social status also means that the child strives to obtain recognition by taking part in activities which will, in his estimation, give him greater prestige in the eyes of those whose approbation he values. Experience has taught him that certain kinds of behavior bring forth approval in any one of many forms: display of affection, laudatory remarks, tangible rewards, and the like. These manifestations he desires because of the effect they have on his own self-evaluation. Competing with adults who have the advantage of superior maturation, strength, size, and experience, he needs the stimulating effect on his self-confidence which is provided by social approval. Because of his restricted experience and immature judgment, the child is in no position to discriminate between various and conflicting types of approval issuing from different sources and can base his choice of behavior only on the greatest promise of reward to be expected. If the amount of social approval, and hence of satisfaction, derived from drawing a picture on a sketch pad is less than that obtainable from other quarters as a result of scribbling obscenities on a wall, the child has no choice but to indulge in the latter form of behavior as a means of obtaining the values he needs. That he would "naturally" prefer parental approbation to that of his gang is a pious expectation without foundation in fact. Whatever is adequate to provide maximal satisfaction by raising social prestige constitutes desirable behavior from the child's point of view; hence the importance attached by psychologists to building up desirable behavior tendencies by making socially acceptable reactions satisfying to the child. The child's environment is primarily responsible for the ways in which he learns to obtain recognition. Parents, teachers,

and all others with whom the child comes in contact, and to whom he looks for approval, have the responsibility of satisfying this fundamental need for recognition and approbation. Failing in this, they must accept the blame if he looks elsewhere and finds satisfaction in the approval granted him by others for acts and attitudes of which parents and teachers may thoroughly disapprove.

Little is to be gained by further cataloguing social needs, all of which are concerned with the satisfaction of the basic needs of security and recognition. Their variations are great because of fluctuations in family constellation, economic status, racial background, emotional maturity, educational level, and all other dimensions in which one child's social environment differs from another's. But whatever the particular configuration, and hence whatever the individual's social needs, they are in a state of continuous readjustment and reorganization in keeping with the changed relationships resulting from the multitude of factors which influence them. The addition of a new, and the departure of an old, member of the family; the arrival of a new child in school; the transfer to another classroom; a change of teachers; sickness affecting either the child himself or a member of his family; changes in the occupational or economic status of his parents; divorce, remarriage, death, worries, feuds involving persons in his immediate environment—in short, any of the unlimited number and kind of experiences which may befall his social entourage necessitates a readjustment in his relationships and results in a modification of his social needs.

It follows that social needs, being dependent upon a virtually endless range of conditions in a state of continuous fluctuation, must of necessity vary greatly from one child to the next and from time to time for the same individual. Stated in other words, though the organic bases of behavior are essentially the same for all members of the species, the specific outlets which will be found for this energy are determined in large part by the function of the individual in his particular milieu.

Expanding Concept of Self

Not only does the maturing individual give ever-increasing consideration to his social environment when developing specific outlets for his basic energy, but his enlarging scope of living gradually includes more and more of the social aspects of his individuality. With the unfolding of differential personality traits resulting from the influence of internal and external factors on the child's attitudes and emotions, each individual develops the further need of maintaining intact his particular personality pattern. The ego, which at first consisted merely of organic functions and the necessity for their smooth operation, expands to include a composite of habitual overt and covert behavior patterns whose continued *integration* now becomes a dominant need. Rather than constituting a new aspect of the child's life, integrative needs represent maturational expansion of his basic organic needs—an enlargement of his world resulting from his biological development and more complex experiencing. The striving to secure continuity of functioning for the organism now includes other than organic factors, namely, attributes and traits developed through experiences which have become incorporated into the individual's sphere of life. Not merely to be fed and kept dry, but also to assure his continued acceptance by the members of his family becomes the child's dominant aim.

When this continuity and integration are destroyed, the result inevitably leads to a dissociation of personal unity and endangers the individual's further existence as an experienced whole, even as interference with organic functions threatens the welfare of the organic whole.

The concept of personality has involved much speculation, often of a metaphysical nature, so that considerable confusion exists regarding its meaning. As used here it connotes the impression which a person makes on others or on himself by his behavior and attitudes. There is no necessary relationship between his fundamental behavior tendencies and his personality, except to the ex-

tent that the former find overt expression in his relationships with others and in his conscious experiencing. As long as he and his associates are unaware of the existence of certain attitudes which have remained submerged or been expressed in a sublimated or substitute form, they are not part of his personality. It is true that the psychologist will find it necessary to unearth these unexpressed tendencies in order fully to comprehend the man's personality, but they cannot be properly included in his personality pattern because they are not afforded recognizable expression. The child's basic dislike for his younger sibling may explain his overly solicitous behavior toward the latter, but inasmuch as he is himself unaware of this relationship and succeeds in hiding it from others as well, the kindness and tender care which he displays toward the baby are correctly identified as personality traits, even though they do not reflect his basic attitude.

In the same way that in Greek tragedies *persona* was the mask worn by the actor to indicate the attitude and characteristic for which his part in the play called, so the child's expressed behavior is the true indication of his personality in that it portrays the role which he has found for himself in life. What went on behind the mask and what goes on underneath the surface of the child's conscious behavior are matters which certainly explain much of what is visible, but do not enter into the reactions set up in the audience and hence are not part of personality.

It follows, then, that personality may give a very inaccurate impression of the "real" individual. It does not represent that individual so much as it reflects the relationships which he has accepted or developed with his environment. Experience has taught him that certain expressive reactions are rewarding in that they satisfy certain social needs, regardless of whether these reactions are really experienced as such or merely assumed because they are useful and expedient. Of necessity, personality is judged on the basis of manifest tendencies rather than on fundamental, subliminal attitudes.

This impression which the individual makes on others and on

himself—the front which he presents—needs to be maintained in order to preserve his identity and secure the continuity of existence of his individuality. It follows that a modification in the formation or attitude of the group may necessitate a readjustment of the expressed traits of the individual, though it need not involve a change in his basic beliefs and orientation. Each individual finds it expedient to emphasize some aspects of his make-up in one situation and other aspects in another. At home the child may appear to be lovable and well adjusted because wise parents have surrounded him with enough affection to satisfy his needs, and with conditions sufficiently stimulating to provide outlets for his developing sense of independence and mastery. That same child, however, may present a very different picture in the classroom where, because of physical inadequacy or intellectual retardation, he finds it necessary to assert himself unduly to gain adequate recognition or attention.

Thus it may be seen that the total personality pattern of each individual includes a variety of manifestations, not all of which are expressed at any given time and under any given set of conditions. Rather does it represent a range of attitudes and behavior tendencies constituting his personality repertory and from which a variety of combinations may be chosen to suit the apparent needs of the situation.

Now it is true that there may be certain predominating traits which seem to express themselves continuously and to be represented in every possible combination and under all conditions. Mostly, however, such apparent consistency is the result of limited observation, as, for instance, in the case of the child who is "shy." True, this trait may be in evidence whenever the psychologist or teacher has opportunity to observe the child, but what of the moments when, together with a congenial group of his own age, he lets himself go and is not conscious of being watched by an adult? The records of the psychologist and our literature alike abound in examples of the apparently introverted person who, under certain conditions, turned out to be the life of the party.

An accurate psychological interpretation must take into consideration the circumstances under which a particular behavior form is displayed as well as the behavior tendency itself. Indolence, aggressiveness, braggartism, cruelty, and similar traits are inaccurate descriptive terms for the total personality, though they may represent fair interpretations of traits expressed in certain well-defined situations.

The areas covered by the individual's experiences usually are homogeneous enough to provide considerable similarity in his personality manifestations, but occasionally the discrepancies may be great enough to cause a real Jekyll and Hyde situation. In such a case, one set of conditions brings out a selection of traits none of which is present under another set of conditions, resulting in the impression that the two "personalities" are different enough to belong to two persons. It is customary to speak of dual personality in cases of this sort, but the phenomenon differs only in degree from the usual experience in which the "normal" person "feels different" in different situations. Only when the two or more patterns are not merely mutually exclusive but apparently incapable of coexistence are we justified in applying the adjectives "split" or "disintegrated."

It should be apparent that the integrative needs of the individual, like his social needs, vary greatly, depending upon a multitude of factors involving the person-environment relationship. This relationship is in part a function of the individual's anatomical, physiological, and chemical make-up. In a preceding section the psychological effects of physiological conditions have been discussed; the alterations in behavior due to chemical agents in the blood stream are considered below. By affecting his attitudes, his behavior-to-be-expected, and hence his utterances and other overt expressions, these conditions play an important part in shaping his personality.

On the basis of social and integrative needs each person determines the desirability of certain experiences and activities. When they appear to further his interests as a personality and enhance

his social position, they are deemed acceptable; in the opposite case, they are rejected; or, if forced upon the individual these experiences are accepted reluctantly and under expressed or covert protest and resentment.

Differential Activity Patterns

Social and integrative needs, collectively referred to as *motives,* are further extensions of basic organic needs. Drives that provide the individual with nonspecific energy derived from tissue conditions lead indirectly to behavior which is directed at a satisfaction of the felt complex needs. While there is little difference in the source of energy and the method whereby it is made available, individuals show marked discrepancies in their motives and hence in the reaction patterns developed through experiencing. Person-environment relationships are dominant factors in determining the specific ways in which essential needs are satisfied. Whereas all normal two-year-olds feed themselves, it is unlikely that any number of them can be found who go about this matter in exactly the same way. Some bang on the table to call attention to their empty plates; others make a verbal request for more food; still others remain silent and sulk. There are those who eat rapidly, using both hands as tools, and others who eat slowly and use the proper tools skillfully. Some eat sloppily and spill food on their bibs, while others masticate carefully and keep themselves clean.

The same fundamental need, of course, is satisfied by each, but wide discrepancies occur in the specific manner in which this goal is attained due to the satisfyingness of previous experiences. If undesirable eating habits have been found less rewarding than proper table manners, the child would have no reason to continue the former. But if the same organic, social, and integrative needs are served adequately in either fashion—if the same amount and kind of food and the same amount of parental approval are attained—the child will tend to become habituated to the easier of the two

outlets and continue to feed himself without regard to the niceties of polite society.

Of course, individuals differ also in the *quantity* of energy normally made available by tissue conditions, and, furthermore, each person may have at his disposal vastly differing amounts of energy on various occasions. As we have seen in an earlier connection, the amount of energy made available by tissue conditions varies with the nutritional status, the emotional pattern, the state of tenseness or relaxation—in short, depends on the chemical make-up of the organism. The quantity and quality of nutriment assimilated by the system, the number of calories and the presence or absence of essential vitamins, the type and proportionate quantity of hormones circulated by the blood stream, the availability or lack of oxygen in sufficient amount to enable the muscles to relax, the presence of fatigue products which cannot be adequately absorbed and eliminated—all these have their mediate or immediate effects on the organic energy at the disposal of the individual.

This means that one person may be "constitutionally" more energetic than another if, under normal conditions, his physiological functions provide him with more chemical elements to be used in the oxidation process. Thus, a greater amount of adrenin in the blood stream leads to a more plentiful secretion of glucose and hence to the possibility of greater energy expenditure. Again, the availability of energy-building nutriments containing sufficient calories and vitamins leads to similar results.

It also means that a person may have at his disposal more energy-building substances at one time than at another, depending upon the amounts of oxygen, adrenin, nutriment, moisture, and other essential substances that are available. This supply depends upon the state of his organism as determined by its condition of relaxation or fatigue, satiation or depletion, quiescence or excitation, all of which have a direct bearing upon his metabolism and hence upon his capacity for energy expenditure.

Exposed to the same situation, different organisms will, therefore, respond differently because:

1. Available energy supplies are quantitatively dissimilar. The amount of energy available to each organism depends upon such factors as nutritional status, time of day, climate, and many others. It varies from time to time for the same person as well as from person to person.

2. As a result of different experiences, these organisms have developed dissimilar habitual energy outlets. Their experiences differ inevitably because of dissimilarities in organic structure, environmental conditions, and the like. In adjusting to a situation containing an element of novelty, the extent and variety of their past experiences determines their effectiveness in selecting an adequate reaction by reducing the chance element to an irreducible minimum.

Experiential Effects

If education is to be effective in developing socially desirable behavior patterns, educators must learn how to deal with individual discrepancies in behavior tendencies and, at the same time, utilize the energies contained in the learning organism in the development of desirable response patterns. It must be remembered, however, that the school is limited in its influence on an individual because of the numerous out-of-school agencies and individuals which exert a never-ending influence in shaping his behavior patterns and because of attitudes and reaction tendencies already firmly entrenched upon entrance to school.

On the favorable side of the ledger the school has at its disposal for a major share of the waking day a highly modifiable organism of great energy and dominated by social and integrative needs upon which the school can base an experiential curriculum to provide desirable individual-environmental relationships.

It was pointed out above that the child depends for his responses on previous experiences which have provided him with either complete and adequate reaction patterns or a background which enables him to reduce the novel element in a problem and thus respond more adequately. This gives education a definite ob-

jective: to provide experiences of such a wide variety that the child will be enabled to deal with novel situations largely by responding to their familiar elements.

However, it is too often forgotten that readjustive behavior, even of the "intellectual" type, is rooted in simpler forms of behavior constituting responses to organic needs. These more elementary needs, moreover, are the roots from which complex social and integrative needs are derived. It is, therefore, not surprising to find that these basic elements are prepotent when in conflict with their more recent derivations, that organic needs take precedence over more "refined" ones, and that elementary behavior forms may interfere with more sophisticated ones. Satisfaction of fundamental needs is prerequisite to rational behavior, and underneath the most aesthetic reaction lies a basic animal-tissue need.

It is largely because of the above factors that modern educators have embarked upon a program of parent education aimed at imparting essential information concerning the needs of their children, which cannot be adequately filled by the school alone. For the educational process to be fully effective, there must be complete cooperation between the school and home, and as many other community agencies as can be persuaded to assist in furthering educational ends. The food supplied by the home should be of the quality and quantity necessary to provide adequately for the organic needs of the growing child. There should be sufficient rest and suitable relaxation and recreation to build up the energy needed for the experiences which the school provides. Furthermore, every attempt should be made to establish those socially desirable behavior patterns and attitudes which make up the aims of education and of society itself.

Through parent-teacher associations and other community agencies the need for cooperative endeavor is being presented to the parents, who, in increasing numbers, are demonstrating a clear understanding of the problem and a wholehearted desire to carry out its implications to the full extent of their abilities. Parental cooperation, however, has its obvious limitations due to intellec-

tual, emotional, or economic factors, so that their efforts often must be supplemented. Juvenile and domestic relations courts are assisting the schools by making those readjustments in the home conditions of the child which clearly are to his best advantage and within the limits of the legal authority of the courts. Civic organizations, parent-teacher associations, and school boards are providing funds with which free lunches, clothing, shoes, glasses, medical care, and other items essential to the welfare of the child, but beyond the means of the parents, are being purchased.

Through consultations with teachers, principals, school psychologists, nurses, and others familiar with the child's needs, parents may obtain reliable information concerning the motives of the maturing individual and the ways in which desirable attitudes and habits may be established. It is being impressed increasingly upon them, individually and as a group, that their responsibilities for the successful development of their offspring do not end with providing food and lodging, and that the school, in the brief period of time at its disposal, cannot be expected completely to modify undesirable behavior patterns and attitudes resulting from unsatisfactory home conditions. Social agencies often are instrumental in persuading parents to accept their responsibilities by educational rather than coercive means. However, when parents persist in being extremely negligent in the performance of their duties, a resort to legal means becomes necessary in the interest of the child and society.

Serious difficulties often are encountered in dealing with many outside agencies, especially those operated on a profit basis. While there are many commendable instances of full cooperation, motion-picture producers and distributors, magazine publishers and dealers, operators of roadhouses, ice-cream parlors, and taverns, and other individuals dealing in commodities and "services" which appeal to youthful needs and tastes have, in some cases, shown a lamentable lack of cooperation. Valuing monetary rewards above the fruits of social consciousness, they have on occasions marketed their wares in flagrant disregard for the best in-

terests of their customers. The problem is particularly difficult because of the fact that any attempts at regulation of printed matter, motion pictures, and amusements are open to the charge of constituting censorship and legislation in restraint of trade. There is real danger that, once the road to such legislation is opened, the tendency to prescribe what is "desirable" in literature and entertainment may get out of hand and develop into a political and authoritarian weapon. However, the alternative to this does not appear to be a do-nothing policy but rather an aroused public opinion, which by collective action can exert suitable pressure on the agencies involved. Much has been done in this respect by women's clubs and other groups of interested citizens; much more must be done, however, before the goal of complete cooperation of agencies in the attainment of educational aims is approximated.

So long as a high degree of cooperation of educational agencies does not prevail, the school system never can be highly successful in overcoming undesirable forms of behavior and in establishing socially desirable ways of thinking and acting. Those other agencies exert a cumulative effect of longer duration and greater intensity than does the school, and unless they work toward similar goals the influence of the school, at its best, will be far too little. Nor has the school been entirely aware of its full social responsibilities. Teachers and the curriculum have been so dominated by subject-matter-mastery goals that the real aims of education often have been woefully neglected. It is encouraging to note, however, that practically all recent reports of nationally known educators emphasize the child-development philosophy of education and urge the continued modification of the teaching-learning process to provide a real experience curriculum, the purposes of which are the full development of the whole child along the lines of growth constituting the aims of education—those behavior patterns deemed essential to the fullest development of the individual and society.

Normally, the satisfaction of "higher" needs must await the fulfillment of organic needs. A hungry, tired child is in no condition

to participate in a mathematics class. Only when a proper organic equilibrium prevails can the individual be expected to show a high degree of interest in attaining satisfaction of social and integrative needs, even though these latter are consistent with his optimal development. Lacking this, the condition of dissatisfaction which is organic in origin will tend to distort the motives based thereon, so that the person may develop values not always in line with socially desirable objectives.

All available evidence points to the fact that prolonged malnutrition and poor health frequently lead to antisocial behavior, as the failure to achieve satisfactory organic conditions affects the social and integrative needs of the individual. Basically he still hopes to attain recognition and stability, but his lack of success, which he ascribes to circumstances beyond his control and imposed by the world in which he has to maintain himself, leads him to attempt to attain these goals by other means. Since the environment has not cooperated with him in the satisfaction of his organic needs, he may reciprocate by working at cross-purposes with that environment in attaining satisfaction for his social needs. Thus he is launched on a career of noncooperation, which in the more serious cases may start with truancy, pilfering, or both, and may end up with serious crimes against society.

Removal of predisposing causes is essential in the control of antisocial behavior. Social workers and charitable organizations as well as teachers must become increasingly aware of the fact that organic needs are prepotent to later developed needs; that desirable social behavior appeals only to the child who has had enough breakfast and enough sleep and whose home life and out-of-school activities provide the satisfactions of his simple basic needs which are his birthright in a well-organized society.

SELF-EVALUATION EXERCISE

Directions: The items below relate to the discussion of social and integrative needs. Each item consists of a statement of a

problem or a psychological fact requiring completion by the selection of one of the three possible phrases, clauses, or sentences listed as *a, b,* or *c.* Read each item carefully, then do the following:

1. Select the phrase, clause, or sentence which best completes the statement or which provides the best answer to the problem of the item concerned.
2. Write down the symbol of the "best answer" (*a, b,* or *c*) on a sheet of paper, together with your reasons for selection, for each item of the exercise. Tell why you believe the answer you selected to be better than the two you rejected.

The fact that one of the three possible answers to an item is considered to be the best answer does not mean that the other two necessarily are wrong or false. Such may be the case; however, it may be that the "best answer" merely is more nearly complete than either of the other two, or that it is more in harmony with modern psychological thought. Remember, don't search for "right" and "wrong" answers or completions to an item, but, rather, for the *best* one of the three possible choices.

1. The Anderson family consists of Mr. and Mrs. Anderson and three children. Mary Ellen is fifteen years of age; George is twelve; and James is eight years of age. Mr. and Mrs. Anderson are well-educated parents and provide an excellent home environment for the children. From a psychological point of view—
   a. the environment of each child is almost identical with that of the others; consequently, one would expect very similar behavior patterns to develop in all.
   b. the environment of each child differs considerably from that of each of the others; consequently one would expect behavior of the three children to vary, even in what is apparently the same stimulating situation.
   c. the environment of all is quite similar; however, similarity of behavior is not to be expected as the children differ greatly in their abilities and interests.
2. Andrew, a boy of thirteen, has been very hard of hearing from

early childhood. A recently acquired new type of hearing aid has resulted in greatly increased ability to hear what is going on around him. From the point of view of Andrew's relations to his family and his school companions it is correct to say that—

a. his environment has changed relatively little, as he still associates with the same persons, and they have not changed to any great extent.

b. his environment is a matter of the physical things and persons of his surroundings. These remain little affected by any change in Andrew's hearing, nor does his relation with them change greatly.

c. Andrew now lives in a greatly changed environment, as his contacts with others have now been greatly modified.

3. From a psychological point of view two persons living together in the same house, far removed from contacts with others—

a. would have very different environments.

b. would have nearly the same environments.

c. would have identical environments.

4. Everett is an eleven-year-old boy of considerably below average academic ability. He attends a school which prides itself on its standards of achievement as measured by standardized subject-matter tests. Everett, consequently, has been failed twice during his school career because of his inability to measure up to standards required for promotion to the next higher grade. He dislikes school and recently has become somewhat of a disciplinary problem to the teacher. A likely, although not necessarily correct, explanation of Everett's behavior in school is that—

a. he is developing into a "bad actor" in the classroom in order to gain social prestige, which he has been unable to do through academic attainments.

b. his folks at home probably encourage him in his dislike for school, so there is little the school can do about it.

c. he believes the teacher dislikes him, so he is taking this means of getting even.

5. From a psychological point of view, which of the following statements regarding the examination and marking systems of the great majority of colleges and universities is most accurate?
   a. The present system creates a great feeling of insecurity on the part of the less favorably endowed but often conscientious student, as he is constantly facing the fear of failure and of being dropped from the university.
   b. The system acts as a reward for the hard-working student and as a punishment for the laggard, thereby greatly increasing the quantity and quality of the work accomplished.
   c. Competition is the essence of life and is essential to the teaching and learning situation if high college standards are to be maintained.
6. The "expanding ego" means primarily that—
   a. the learner is becoming more and more egotistic in his evaluation of himself.
   b. the organism is becoming more and more aware of its relations with others and is attaining a higher and higher degree of integration of social and biological functions.
   c. the learner is becoming more and more successful in competing with others in attaining his goals.
7. From a psychological point of view the more acceptable concept of "personality" is—
   a. the sum total of a person's traits.
   b. the behavior of the person when he is not aware that he is being observed.
   c. the impression he makes upon others and upon himself.
8. It may be said of a person's personality that—
   a. it remains relatively the same from situation to situation.
   b. it varies with the situation and often may seem contradictory.

c. a person's expressed personality is seldom his true personality.

9. Mary is very "shy" in the classroom and avoids reciting except when called upon by the teacher.
   a. This undoubtedly is characteristic of Mary's behavior in all or most situations, and it may be said reliably that Mary is a person of "shy personality."
   b. Mary's behavior patterns in school are not necessarily indicative of her mode of behaving at home or when playing with other children in the community.
   c. Mary's behavior at school indicates that she almost certainly will grow up to be a timid, antisocial person who is socially maladjusted.
10. The most acceptable concept of the phrase "drives and motives" is that—
   a. drives develop from tissue, or organic, needs; motives develop out of social and integrative needs.
   b. drives and motives are essentially the same, merely being different terms to indicate basic urges.
   c. motives are physiological in character; drives are social in their origin.
11. The most nearly accurate characterization of the majority of school pupils from a psychological point of view is:
   a. In general, pupils in the public schools seem to resist learning and must be forced into necessary learning situations either through promises of rewards and punishments or through some device to make play out of the required schoolwork.
   b. School pupils are most anxious to learn whatever the teacher directs and normally enter into learning situations with enthusiasm and purpose.
   c. Pupils normally are curious and full of energy and want to learn those things which to them have purpose, but often rebel where purpose is lacking, or at least work reluctantly.

12. Margaret comes from a poor and rather uneducated family. She is malnourished and gets inadequate sleep. She is, however, a child of better-than-average academic potential.
    a. One should expect her to do better-than-average work in school, as it has been demonstrated that physical condition has little or no effect on academic learning, assuming, of course, that an illness is not of such a nature as to keep the child from attending school.
    b. One should not expect her to achieve much in school, as malnourishment and lack of rest make learning almost impossible.
    c. There is inadequate evidence upon which to make a positive prediction; however, the learning ability of children is adversely affected by being continuously hungry and tired.
13. Continued poor health—
    a. is very apt to result in the development of socially undesirable behavior patterns.
    b. does not normally affect one's social behavior.
    c. normally results in the formation of desirable social reactions as the child becomes more and more dependent upon others for care.

SUGGESTED READINGS

Berne, Esther Van Cleve: *An Investigation of the Wants of Seven Children,* University of Iowa Studies in Child Welfare, Vol. IV, No. 2 (March, 1930).

———: *An Experimental Investigation of Social Behavior Patterns of Young Children,* University of Iowa Studies in Child Welfare, Vol. IV, No. 3 (March, 1930).

Bode, Boyd H.: *How We Learn,* D. C. Heath and Company, Boston, 1940. Chaps. XIV, XV.

Goodenough, Florence L.: *Developmental Psychology,* D. Appleton-Century Company, Inc., New York, 1934. Chap. X.

Hopkins, L. Thomas: *Integration, Its Meaning and Application,*

D. Appleton-Century Company, Inc., New York, 1937. Chaps. I–IX.

Isaacs, Susan: *Social Development in Young Children,* Harcourt, Brace & Company, Inc., New York, 1933. Chap. XII.

Jersild, Arthur T.: *Child Psychology,* 3d ed. Prentice-Hall, Inc., New York, 1947. Chaps. V, VI.

Landis, Paul H.: *Adolescence and Youth: The Process of Maturing,* McGraw-Hill Book Company, Inc., New York, 1945.

Meek, Lois H.: *Your Child's Development,* J. B. Lippincott Company, Philadelphia, 1940. Chaps. VII–IX.

Pressey, Sidney L., and J. Elliott Janney: *Casebook in Educational Psychology,* Harper & Brothers, New York, 1937. Chap. IV.

———: and Francis P. Robinson: *Psychology and the New Education,* Harper & Brothers, New York, 1944. Chaps. VII–IX.

Progressive Education Association, Commission on Secondary School Curriculum and Committee on Workshops, *The Personal-Social Development of Boys and Girls,* Progressive Education Association, New York, 1940. Parts I, II.

Ryan, Carson W.: *Mental Health through Education,* Commonwealth Fund, Division of Publication, New York, 1938. Chaps. X, XI.

Wheeler, Raymond H., and Francis T. Perkins: *Principles of Mental Development,* The Thomas Y. Crowell Company, New York, 1932. Chap. VII.

CHAPTER IV

The Effect of Emotion on Activity

PROBLEMS

1. What physiological conditions are characteristic of emotional disturbances? What purposes do these conditions serve?

2. What are the effects of emotional disturbances upon the normal behavior patterns of the organism? Is the tendency toward more or less primitive reactions? Explain.

3. To what extent can emotional behavior be controlled by the individual? What are the most effective means of developing and exercising emotional control?

4. Are emotional disturbances specific or general in their effects upon the organism? Explain.

5. How may apparently unreasonable emotional behavior be explained in adults? By what methods may such behavior be modified?

6. Explain "conditioning" and "reconditioning" as they apply to emotional behavior.

7. In what ways and to what extent may emotional behavior be

modified by the breadth and depth of an individual's experiences?

8. What are the dangers of escape and avoidance techniques in emotional control?

DISCUSSION

Organic Mechanism of Emotion

It will be recalled that muscular activity is made possible by the absorption of glucose from the blood stream. When the tissue becomes excessively active it absorbs this sugar much more rapidly than during more quiet states, so that the necessity for replenishing this food supply becomes more acute. Glycogen, the basic form of glucose, is manufactured in the liver, and its conversion into particles which can be carried through the organism by the blood stream depends upon the intricate balance of hormonal secretions. As long as this metabolism remains constant, a steady supply of glucose is made available at about the same rate that it is converted into energy by the muscles, but any disturbance of the chemical balance may result in a changed rate of glucose release into the blood. Especially is this true when there is an excess of *adrenin* which stimulates the liver and thus promotes the secretion of glucose. The immediate effect of adrenin in the blood stream, then, is to make available more potential energy to the tissues. But it also produces secondary effects such as dilation of the pupils, heightened blood pressure, and increased secretion of saliva. Because of the effect of adrenin on the smooth musculature of the digestive apparatus and on various parts of the circulatory system, a shift in blood volume occurs away from the abdominal region and toward the voluntary muscles, brain, lungs, and heart. All these organs and tissues are prominently involved in emotional behavior, and their needs take precedence over those of the digestive organs at a time when quick action, rapid thinking, and sustained effort without undue fatigue are demanded by

the emergency nature of the situation. Adrenin is responsible for these and several other related organic changes when it becomes present in the blood stream in larger than normal quantity for a particular individual.

It must be noted that organisms differ in what for them is the "normal" amount of adrenal secretion. This, in part, is an explanation of their possessing different amounts of energy and different thresholds of excitability under "normal" conditions. The concept of excessive secretion, therefore, is a relative one. Also, it must be mentioned parenthetically that adrenin may either be produced by the person's adrenal medulla or be injected into his blood stream. In either case the resulting biological processes are essentially the same.

The effect of these organic changes is to prepare the tissues and organs for strenuous activity. If this does not take place, the preparatory state is continued until the excessive amount of glucose has been absorbed by the tissues and the normal state of organic equilibrium returns.

Furthermore, a condition which arouses emotional excitement causes certain skeletal reflexes to be displayed which do not occur at ordinary times. Gritting the teeth, clenching the fist, and many other similar reactions are indicative of the fact that a state of emergency exists in the organism calling for drastic adjustments. Neurological evidence indicates that these responses originate in the hypothalamus rather than in the cortex. Normally, the latter exercises a controlling influence on the activity of the hypothalamus, which, being a more primitive center developed much earlier in the evolutionary process, stimulates more archaic forms of behavior. These primitive tendencies are restrained, integrated, redirected by the higher brain centers; but when such centers are inactive, the lower centers take over and bring about more violent, less organized, and uncoordinated behavior. Drugs of various kinds, brain injuries, and other conditions that tend to depress temporarily or interfere permanently with the functions of the cortex result in a display of emotional behavior which is uncontrollable.

From the hypothalamus, which directs these activities, afferent impulses may reach the cortex, thus causing awareness of the emotion; but frequently the condition of the higher centers precludes the reception of these impulses, so that the individual remains quite unaware of his emotional behavior (*e.g.*, while under the influence of nitrous oxide).

The hypothalamus controls the skeletal and many of the physiological changes which characterize an emotional state. It does so principally through its effect on the different parts of the autonomic nervous system, which, under normal conditions, keeps the internal organs functioning smoothly. When emotional conditions prevail, the hypothalamus reorganizes the chemical balance of the organism through the adrenals and other glands whose rate of functioning it regulates. From this it is clear that these changes, brought about by the action of lower brain centers and the smooth musculature, are incapable of conscious inhibition and control.

Another matter is the control which the higher centers may exercise over the expressive movements indicative of the upsetting of the body metabolism. Unless the cortex is rendered inactive, it can exercise an influence on overt activities resulting from the situation causing the emotion; it cannot, however, interfere with the organic state directly. By inhibiting extreme reactions and by distributing the excessive amount of available energy over a longer period of time, the cortex may keep the excitation from spreading or from becoming unnecessarily violent; but it cannot counteract the influence of the lower centers upon the ongoing organic functions. Emotional control, then, on physiological grounds can take either one of two forms: (1) the cortex may retain its control over the thalamus and thus prevent emotional conditions from arising, or (2) it may modify the tendency to exaggerated behavior forms which are normal under emotional conditions. This latter can be done either by direct inhibition or by diffusion of energy expenditure. In either case, however, the emotional condition is not *directly* affected, but its *expression* has become less drastic.

Effects of Excitement on Behavior

Heightened vitality is the characteristic result of the organic changes occurring in emotional conditions. The resulting behavior form depends upon the particular outlet which the organism has developed in similar or like situations. It has been seen that, typically, the activities of the infant are dependent upon the available amount of energy rather than upon the situation provided by his environment, and that this behavior is random, diffuse, and nonspecific. When excessive amounts of energy become available as a result of physiological and chemical factors, this mass behavior simply becomes intensified, but no more specific or adequate to the situation. Violent kicking of the legs and waving of the arms replaces milder forms of activity; vigorous head movements occur instead of the hesitating turning from one side to the other, and loud cries replace the more restrained chance vocalizations.

It is characteristic of emotional responses that they represent in exaggerated form the reaction patterns typical of the individual in such situations under less exciting circumstances. They are, therefore, indexes of behavior tendencies and attitudes which would have been exhibited in milder form or even completely repressed if the circumstances had not produced an emotional reaction. Because of their physiological basis of excessive energy, and especially when there is decreased conscious direction of behavior, emotions often overcome the habitual restraint which the individual has placed on certain tendencies the expression of which does not appear to be consistent with his social or integrative needs. The individual's restraint may be sufficient to suppress a behavior tendency of ordinary intensity, but the increased vigor with which the condition of the organism has supplied a reaction pattern often is too great to be held down by the shackles which have been imposed on it, weakened as they are as a result of decreased cortical activity.

During emotional excitement the individual does not engage in behavior which is new to him or foreign to his nature. If he en-

gages in socially undesirable ways of reacting it is because self-imposed controls are no longer strong enough to restrain him as they would under normal conditions. There is a general tendency to assume that a person committing an act while emotionally upset should not be held fully accountable. However, the reactions displayed under these conditions are just as much his as are those which he manifests in ordinary situations. The tendency to react in a certain way has merely become more intense and, as a result, has grown out of hand, because the restraining influence has been lessened proportionally.

Due to the effective repression of certain tendencies during "normal" conditions, a person may be unaware of their existence until they manifest themselves unmistakably when he is emotionally disturbed. This successful suppression illustrates the potency of social and integrative needs, which are capable of gaining precedence over fundamental attitudes and basic urges, at least until the latter become magnified and intensified as a result of organic conditions, and thus become ultimately prepotent. Not infrequently, people are amazed at their own reactions when emotionally upset. The child who is thwarted in carrying out an activity on which he had set his heart may, during the ensuing tantrum, hit his mother and scream, "I hate you, hate you, hate you!"—and it would indeed be naive to suppose that this expressed attitude came upon the child suddenly when his mother prevented him from doing what he wanted so much to do. Rather would it seem that the attitude had existed previously in the form of a strong, though probably unconscious, resentment held in check by the boy's social needs but brought to light in an explosive manner by the emotional state resulting from his mother's actions. The smoldering resentment now can be held in check no longer and, in the child's stirred-up state, takes the form of an expression of violent hatred. Emotional acts often have been characterized as "primitive" or "savage" behavior. These adjectives are to be considered literal rather than symbolic, since in reality the distinctive characteristic of "civilized" behavior is the suppression or diversion

by social considerations of emotional activity based on organic needs. Such failure to find expression does not alter the fundamental tendency, which remains dormant until the restraining influence is removed (as in insanity) or sufficiently lowered so that the increased intensity of the tendency may overcome the imposed obstacle (as in emotional behavior). In the exact sense of the word, acts of emotion represent a more primitive level of activity and resemble those considered typical of savage society because they are fundamental behavior patterns freed from the influence of "higher" motives.

It is mainly for this reason that the reaction of society against unrestrained emotional acts is so drastic and unrelenting. The penal law places the most extreme penalties upon acts which are based upon tendencies so fundamental that the normal individual is generally aware of their presence within himself. Because he has assumed the responsibility for checking these tendencies, an individual feels more keenly about a person who is so devoid of social consciousness that he does not exercise that restraint. This failure to exercise restraint in an emotional situation, intolerable as it is in an organized social group, brings out in sharp relief the presence of the same tendency, and the struggle necessary to suppress its manifestation, in persons exercising emotional control. The result is a stronger condemnation of such acts than of others which are based on tendencies which the critic has not himself experienced. In our society, murder is among the most severely condemned acts. However, an act is judged primarily in terms of the motivation and the accompanying mental state of its agent rather than on its own merits. This is evident from the growing toleration of nonemotional murder (as in euthanasia) and from the glorification of organized killing (as in war). Not the fact that a person has been killed is significant, but rather the fact that his murderer was motivated by a desire which all of us have experienced and which he failed to control by social motives to the contrary.

With increased physical maturation and a wider variety of ex-

periences, changes occur in general behavior and in emotional expression. The first and most obvious differentiation occurring quite early in the infant's life is that between positive and negative excitement, distinguished by approach and withdrawal, respectively. Progressively more complex emotions continue to develop from these two, retaining the positive and negative feeling tone characteristic of the earlier forms. Whereas the less complex excited states are relatively pure in feeling tone, those which develop later may contain a mixture of pleasure and displeasure to such a degree that they virtually neutralize each other, resulting once more in a state of general excitement.

It must not be overlooked that "pleasure" and its opposite are relative and subjective terms of evaluation. Circumstances may shape an individual's sense of values in such a way that what to others might appear distinctly unpleasant becomes a form of gratification. To a mystic the experience of intense emotional suffering and corporal punishment forming part of his creed causes apparently ecstatic states of pleasure and happiness. In a milder form, many persons "enjoy a good cry," attend funerals of people unknown to them, derive pleasure from suffering humiliation (*e.g.*, the Messiah complex), and in other ways consider pleasurable emotional experiences which are painful to others.

The departure of a troopship to a battle area offers an example of the mixture of pleasure and displeasure resulting in a neutralized state of excitement. The sorrow of leaving behind one's loved ones is counteracted by the thrill of anticipation of vigorous activity, of visiting strange places, of returning a hero to one's home town.

The attachment of emotional responses to certain situations is more to their general than specific aspects. For this reason the excitement caused by an object or person is transferred quite readily to other objects or persons connected with them by certain common characteristics. Thus, many emotional reactions unexpectedly occur late in life because of certain similarities between a new situation and an older one to which an emotional response

has become attached. Frequently the primary emotional stimulus ceases to operate when the child grows older, but the secondary emotional attachments remain in force. This may make it difficult to determine the origin of a particular reaction which was established by transfer at an earlier age.

A well-known example of such emotional conditioning is the fear reaction caused in a young child when confronted with a small, furry animal after that object has become associated in the child's experience with a noise of which he has always been afraid. Not only does the harmless animal now cause a negative response as a result of these experiences, but other objects showing an apparently superficial resemblance to it are likely to produce the same effect (*e.g.*, a bearskin rug or his mother's fur coat). Such fears, appearing at a later date, seem unreasonable, but are the result of the irradiation of the emotion from the original context to loosely related situations. Even after the child has become sufficiently familiar with small fur-bearing animals to lose his fear of rabbits and kittens, a violent dislike for fur coats and rugs may persist. Moreover, such fears are more difficult to overcome because their origin is neither conscious nor voluntary, but is the result of conditioning, involving unconscious learning through the accidental and superficial association of the two situations in the child's experience.

Many adult dislikes and emotional attachments are of this nature. It is extremely difficult to explain on a rational basis one's emotion of patriotism, which is none the less intense for its complex unconscious features. In the same way, a dislike for members of a minority group may be the more violent because its origin lies in earlier emotional conditioning in which the causative association has long been forgotten.

Psychoanalysts base much of their curative procedure on these subconscious associations on the assumption that, once the unreasonableness of the connection has become clear to the individual, a more rational response can be developed. This means that past experiences, apparently forgotten, must be recalled in con-

scious form and the original emotion dissociated from the conditioned situations. The difficulty, of course, lies in the fact that all of these materials are below the level of consciousness; that by mere reasoning nothing can be accomplished; and that through such techniques as dream analysis and free association the situations and interconnections must be brought back in their original intensity before a cure can be effected.

Of the methods available to eliminate undesired emotional responses, reconditioning appears to involve the most favorable and lasting effects. Because the great majority of fears and other emotional reactions have come about as a result of harmless persons or events being associated in experience with emotion-provoking situations, the reverse process can be used in order to establish more reasonable responses. After a child has become conditioned to fear a rabbit, it is possible to reestablish an approach rather than a withdrawal tendency by connecting this object with a situation to which he responds favorably and positively. In this manner the pleasure derived from a certain type of delicacy of which the child is particularly fond will become associated with the rabbit if both experiences are presented together frequently and regularly.

Obviously, such reconditioning is more effective when it takes place soon after the conditioning process occurred. After the response has become thoroughly established as a result of many repetitions, its elimination becomes progressively more difficult.

The Intensity of the Emotional Reaction

Not much has been said so far about the *intensity* of the emotional reaction. Remembering the organic origin of emotions, we should expect that the extent of the physiological change would determine the vigor of the response. In a general sense, this assumption is correct. However, because of the fact that the higher brain centers, primarily the cortex, are capable under normal conditions of influencing the activities of the lower ones, such as the hypothalamus, it is possible for the individual to exercise some extent of control over the intensity of these reactions. This means

that, though the organic conditions may prepare the tissue for a violent response, the individual may modify the intensity of his reaction by exercising voluntary restraint. Of course, this does not imply that the available glucose is thus absorbed—rather, it leaves the organism in a state of heightened vitality which may wear off only after a prolonged period of time, whereas a violent outburst of activity would have provided immediate relief. When Johnny wants to go to the movies and Mother tells him that he has to shovel the snow off the sidewalk first, he may explode and thus rid himself of the accumulated potential energy provided by his emotional reaction to her "unreasonable" demands. However, this energy may be worked off in many other ways and if he decides to obey, it is likely that the job will be finished in half the time which he would ordinarily require to shovel the snow, just because his pent-up energy finds such a welcome outlet in keeping the shovel going more rapidly and more vigorously.

Excess tension can be released in a socially acceptable manner quite as satisfactorily as in an asocial tantrum. In such cases the overt energy expenditure does not avail itself immediately of all the potential energy produced organically, with a resultant prolongation of the tension. This may manifest itself in excessive spontaneous movements bearing no direct relations to the situation (popularly known as a state of *nervousness*) or in an application of additional energy to the task at hand. The child who has lost one of his playmates may not show his grief in any obvious fashion, but it is likely that his emotional tension will result in a digestive upset, troubled sleep, forgetful behavior, or general irritability which will persist as long as his organic state remains in a stirred-up condition. On the other hand, emotional control may cause the individual to pursue more vigorously an activity which ordinarily would require less energy and which could be performed in a more leisurely fashion. Because the energy provided by organic conditions is essentially nonspecific, the outlet thus provided relieves the pressure quite as well as a sudden and explosive reaction.

States of mild excitement, therefore, are distinctly beneficial to the individual who has learned to utilize this excess energy to further his dominant needs. The primary purpose of the "pep talk" is to stir up the members of the team immediately before a game so that a maximum amount of potential energy will be at their disposal. To be effective, of course, this increased energy must be applied to playing the game rather than to telling the coach what they think of him and his abusive language. Emotional release is equally well-provided in this manner. It is imperative that the coach know his team well enough to realize just how far to go to achieve the desired results, as there is danger of overdoing it and so stirring up so much excitement that an adequate outlet cannot be provided, resulting in what is termed an *emotional block.* An additional illustration of an emotional block is the little boy whose dog has just been run over by a car. He may be so overcome with emotion that he remains rigid in the middle of the road and fails to notice the oncoming truck which cannot stop in time to avoid hitting him.

We can distinguish emotions according to their intensity and their behavioral manifestations as *mild* or *disruptive.* The former represent an actual advantage to the individual's behavior in that they enable him to become more vigorous and adequate; the latter interfere with the smooth performance of his tasks by their insistent tendency to seek direct relief in activities inconsistent with his ordinary behavior and routine (crying spells, tremors, fainting, unthinking attack, etc.)

The important psychological point here is that the person retaining some measure of cortical control over his behavior is in a position to prevent excessive physiological disorganization and its disruptive effects. As an intraorganic fact, the emotional intensity is not thereby affected, but its expression in overt behavior thus can be modified. As a result, the further stimuluation to internal disequilibrium provided by intense, disorganized activity is lessened or eliminated and the organic condition permitted to return to normal more rapidly than would otherwise be the case.

To this extent, emotions can be "controlled" voluntarily. Often this term is applied to another approach: preventing the emotion-provoking situation from arising. Naturally the most reliable way of getting around a problem is to avoid it, but this can hardly be classified as an attempted solution. Though a man who is mortally afraid of a lion may avoid going to the circus and the zoo and thus eliminate the problem, he may be placed in a situation where such a contact is inescapable. As long as everything goes well, the emotion need not be displayed because the occasion for it does not arise; in case of failure to avoid contact, however, his previous precautions are of no avail, and the emotion will occur with all its vigor and disruptive effects.

It is possible to read teleological implications into the above statement, so that a clarification seems in order. Each situation to which the organism responds offers the opportunity of engaging in activity resulting in certain consequences. On the basis of related experience the individual usually is capable of judging these consequences as either desirable or undesirable, and he selects his behavior pattern according to this evaluation. Now "experience" need not imply that the person has actually engaged in that particular form of behavior under similar conditions on some occasion in the past. It *does* imply that the situation, its meaning and likely results, are familiar to him through some form of either direct or indirect experience and that, on this basis, he has developed a positive or negative attitude toward it. In this sense, any situation which has played a part, however remote, in his experiencing is familiar to the individual, whether this familiarity is based on personal contact or secondhand information. Not only has the situation become familiar, but also the responses and their consequences as experienced by either the person himself or some other person concerning whom he possesses information. A predicted outcome of a response, therefore, in no sense of the word implies teleology, but is possible only through past experience of one sort or another. For instance, when Dick, on his way to school, meets Jim and Tom armed with fishing poles, he contem-

plates whether to join them or continue on his way to school. His evaluation of these alternatives involves his previous experience in a similar situation in which the consequences turned out to be a visit from the truant officer and a subsequent paternal spanking. In the absence of such experience, either at first hand or from hearsay, Dick hardly is in a position to choose sensibly because he has no way of anticipating the probable results, and on these his choice must depend.

If the situation is one which has not been experienced before in any manner, and there is no way of estimating the results of one's reaction or of evaluating the relative merits of alternative responses to it, ideational behavior is thwarted and the individual is face to face with a crisis. This crisis can be solved only by arbitrarily deciding upon a reaction and taking a chance, or by avoiding the situation by evasive or withdrawal behavior. It follows that a person whose experiences have been wide and varied enough to cover a vast array of situations will find himself in such an emergency less frequently than one with limited experience. Indeed, we find that situations calling for emotional responses because no overt methods of dealing with them are readily available become increasingly rare with increasing maturation of the individual and with advancing civilization. This progress is noticeable in the developmental history of a child, in comparisons between individuals at different levels of maturation and culture, and in the history of the human species.

Emotions, in the truest sense of the word, are indications of lack of experience. This implies that through experience a once unknown and unpredictable situation may become familiar enough to obviate the necessity for an emotional response. A typical instance of this is the unreasonable fear of being in high places which can be overcome successfully by repeated experiencing. Another is the gradual immunity which most individuals develop toward situations originally evoking righteous indignation, provided they are long continued or repeated often—for instance, violations of international treaties, persecutions of minority groups, political

scandals, etc. This readjustment is based on repeated experiences in which the original emotional reaction, caused by inability to decide on what to do under the prevailing conditions, is gradually replaced by a more neutral attitude of relative indifference on the grounds of the experienced futility of attempting to manifest an overt protest.

The alternative to taking a chance by arbitrarily selecting reactions to wholly unknown situations is to evade the problem by withdrawing from the situation. This behavior, if it becomes habitual, leads to the many kinds of behavior classified as defense mechanisms, phobias, repressions, neurasthenia, nervousness, and anxiety—techniques whereby the individual seeks to escape the crisis by developing apparently adequate causes why he cannot be expected to make a decision. These behavior types, which will be discussed in some detail below, include the development of physical disabilities, fantastic ideas, nervous symptoms, and "logical" reasons, all serving the purpose of convincing the individual that a decision need not be made at the time.

In these cases, the individual's available energy is sidetracked into channels not connected with the problem at hand and not leading toward its possible solution. Such behavior forms, by utilizing the person's vitality, actually interfere with and render impossible adequate solutions. They are therefore classified as *disruptive* emotions, even though not necessarily eliciting intense reactions, in contrast to the milder emotions which, as we have seen, actually aid in the performance of tasks by releasing additional energy to be used in their completion.

Confronted with a problem of such novel form that no indication of an adequate response is available, the organism returns to its original, primitive mode of reaction. In early infancy a new object or other unfamiliar situation causes the infant to become vigorously active in a diffuse, disconnected fashion through random movements not directed by the higher brain centers but stimulated by the hypothalamus. This behavior is again in evidence when a more mature person meets an unfamiliar problem,

and, as indicated above, it is displayed to the extent of the unfamiliarity of the situation. It goes without saying that this reaction may not find expression in the same kind of overt movements that are characteristic of the disturbed infant, and that the excitement produced by the frightening or alarming novelty of the situation may be largely consumed by internal reactions of anxiety, worry, or irritability. Even in that case, however, the external behavior is likely to be less poised, more hesitant, less smooth, and less adequate than is normal for that individual under conditions with which he is more thoroughly familiar.

SELF-EVALUATION EXERCISE

Section I

Directions: The items below relate to the discussion of the effect of emotion on activity. Each item consists of a statement of a problem or a psychological fact requiring completion by the selection of one of the three possible phrases, clauses, or sentences listed as *a*, *b*, or *c*. Read each item carefully, then do the following:

1. Select the phrase, clause, or sentence which best completes the statement or which provides the best answer to the problem of the item concerned.
2. Write down the symbol of the "best answer" (*a*, *b*, or *c*) on a sheet of paper, together with your reasons for selection, for each item of the exercise. Tell why you believe the answer you selected to be better than the two you rejected.

The fact that one of the three possible answers to an item is considered to be the best answer does not mean that the other two necessarily are wrong or false. Such may be the case; however, it may be that the "best answer" merely is more nearly complete than either of the other two, or that it is more in harmony with modern psychological thought. Remember, don't search for "right" and "wrong" answers or completions to an item, but, rather, for the *best* one of the three possible choices.

1. Energy resulting from the development of an emotional condition within an infant—
   a. tends to be specific in nature and to result in predetermined behavior.
   b. is nonspecific in nature, resulting in generalized activity.
   c. is controlled by the upper brain centers and directed to goal-seeking activities.
2. Emotional behavior, as a general rule,
   a. is literally more primitive than nonemotional behavior.
   b. is actually more socially refined than most other forms of behavior.
   c. is subject to the same controls as other forms of behavior; therefore is neither more nor less primitive, but depends entirely upon the particular situation.
3. An emotional condition results—
   a. when the organism is disturbed by an unpleasant stimulating situation.
   b. from certain chemical imbalances which may result either from excessive glandular secretion or through injection of adrenin into the blood stream.
   c. from an excess of sugar in the blood stream.
4. The most acceptable of the following statements relative to emotional control is that—
   a. the higher brain centers cannot control the secretions of glands and, consequently, cannot prevent the development of an emotional condition. Within bounds, however, resultant behavior can be channeled into socially acceptable forms of behavior.
   b. emotional behavior is specific in nature and under control of the lower brain centers. An individual, therefore, can exercise almost no control over his emotional behavior.
   c. a person of strong will can exercise control of those physiological conditions which result in an emotional condition within himself, and thereby prevent such a condition from

developing. He can prevent an emotional state from arising, so that there is no need for control techniques on his part.

5. George has grown excessively angry as a result of taunts by another boy.
   a. The emotional condition will be of greater duration if he avoids violent action, but broods over the insult rather than fights.
   b. The emotional condition will subside quite rapidly if he can control himself to the extent of avoiding violent action.
   c. He probably can relieve his emotional condition quite rapidly by returning the names called him and then going on about his own business.
6. A particular situation which causes an emotional disturbance in an adult—
   a. often results from childhood experiences now forgotten by the adult; in other words, which have been relegated to the subconscious.
   b. almost always is well understood by the adult, so that any person can control his emotions through the exercise of reason if he is so inclined.
   c. can generally be controlled by an "avoidance" technique, and normally should be.
7. It is generally agreed by psychologists that—
   a. emotions tend to wear down the organism, physically and mentally, and should be avoided whenever possible.
   b. emotionalized activity possesses a stronger drive than is the case otherwise and may aid learning if the emotion does not become excessive and too prolonged.
   c. educators should try to develop a strong emotional force behind most learning activities, as intense emotions drive the individual to bigger and better things.
8. Betty, aged sixteen, has an uncontrollable fear of snakes and

all other crawling animals. As a child she lived in a region where poisonous snakes abound and was taught by her mother to fear snakes, even before she knew why.

a. Betty's fear is inborn and, therefore, cannot be eradicated. She should, consequently, avoid snakes at all times in order to prevent excessive emotional disturbance.

b. Betty's fear is of her own fancy. If she could be locked in a room with some harmless snakes she would soon learn that they couldn't hurt her, and she would lose her fear of them.

c. Betty's fear is of a subconscious nature—what is often referred to as "conditioned behavior." She probably will be able to overcome her fears only if she can be made to see the unreasonableness of them. Along with this there must be planned situations involving snakes—situations leading to reconditioning.

Section II

Directions: The following items relate to the effect of emotion on activity. Some of the statements and described situations are in harmony with modern psychological thought; others are not. On a separate sheet of paper write the word "agree" if you believe the statement or the described situation to be in harmony with modern psychological thinking, or "disagree" if you believe otherwise, together with reasons for your agreement or disagreement.

1. Severe emotional disturbances tend to pile up under certain conditions and may result in behavior seemingly contrary to the person's normal behavior characteristics. However, a piling up of emotion-provoking stimuli often can be minimized through behavior control by the higher brain centers, so that an emotional condition may become less aggravated than would be the case if no such controls were established.
2. A person who is strong-willed can prevent an emotional condition from developing within himself, as the conditions which result in such disturbances are subject to cortical control.

3. Emotions are innate in character and primitive in the resultant behavior; consequently, emotional behavior is relatively unaffected by the experiences of the growing human organism.
4. An avoidance technique may be desirable at times. However, it is a rather dangerous procedure of emotional control as there are times when such avoidance becomes impossible, and the organism then is subject to the violent reactions which he is seeking to avoid. Practiced in excess, it may become a substitute for making decisions and thereby very detrimental to the person concerned.
5. Normally, all persons are subject to the same rate of glandular secretion. Theoretically, then, any person's emotional condition at a given time could be determined by an analysis of the blood to determine the amount of adrenin present.

SUGGESTED READINGS

Bridges, K. M. B.: *Social and Emotional Development of the Preschool Child,* Kegan Paul, Trench, Trubner & Co., London, 1931.

Cannon, W. B.: *Bodily Changes in Pain, Hunger, Fear and Rage,* rev. ed., D. Appleton & Company, Inc., New York, 1929.

Goodenough, Florence L.: *Anger in Young Children,* University of Minn. Press, Minneapolis, 1931.

Harlow, H. F., and R. Stagner: "Psychology of Feelings and Emotions. Theory of Emotions," *Psychological Review,* Vol. 40, p. 194–195, 1933.

Jersild, A. T., and F. B. Holmes: *Children's Fears,* Child Development Monographs, No. 20, Teachers College, Columbia University, New York, 1935.

Jones, M. C.: "Emotional Development," *Handbook of Child Psychology* (Carl Murchinson, ed.) Clark University Press, Worcester, Mass., 1933.

Koffka, K.: *Principles of Gestalt Psychology,* Harcourt, Brace & Company, Inc., New York, 1935. Chap. IX.

Lund, F. H.: *Emotions of Man,* McGraw-Hill Book Company, Inc., New York, 1930.

Mid-West Conference on Character Development, *The Child's Emotions,* The University of Chicago Press, Chicago, 1930.

Murphy, Lois B., and Henry Ladd: *Emotional Factors in Learning,* Columbia University Press, New York, 1944.

National Society for the Study of Education: *Forty-first Yearbook,* Part II, "The Psychology of Learning," Public School Publishing Company, Bloomington, Ill., 1942. Chap. IX.

Prescott, Daniel A.: *Emotion and the Educative Process,* American Council on Education, Washington, D.C., 1938.

Ruckmick, Christian A.: *Psychology of Feeling and Emotion,* McGraw-Hill Book Company, Inc., New York, 1936.

Wheeler, Raymond H., and Francis T. Perkins: *Principles of Mental Development,* The Thomas Y. Crowell Company, New York, 1932. Chap. XI.

Young, Paul Thomas: *Emotion in Man and Animal,* John Wiley & Sons, Inc., New York, 1943.

CHAPTER V

The Effects of Success and Failure

PROBLEMS

1. What are the characteristics of a "satisfying" experience? What is its effect upon future behavior?

2. What are the factors which may cause one motive or drive to become dominant over another? How is the manner of satisfaction of needs related to past experience?

3. In what ways is the concept of "will power" inadequate as an explanation of behavior?

4. What is the relationship of strength of motives to the efficiency of learning a response? Do repetitions always lead to the establishment of a habit? Explain.

5. Why is it generally so difficult to replace well-established habits with new forms of behavior? How can it be accomplished?

6. To what extent, and under what conditions, are interest and success dependent upon maturational levels? What is the relationship of insight to experience?

7. From a psychological point of view, what constitutes success or failure? When may it be said that an individual has succeeded or failed?

8. What is meant by the statement that success or failure both tend to "spread" in their effects upon human behavior?

9. Under what conditions does failure become harmful to the individual? What are the undesirable results of continued failure in a particular field of endeavor?

10. Under what conditions is segregation of "deviates" desirable? When undesirable?

11. How can a child be taught to recognize his weaknesses as well as his strengths of potential? Is this desirable?

DISCUSSION

The Experience of Success

It has been shown in the course of the preceding discussions that basic energy, made available by organic conditions, finds an outlet through activities which the individual considers satisfying on the basis of his experience. This implies that such behavior results in a satisfactory readjustment of the organism to a situation over which the individual gains control through reacting in that specific manner. Activity is initiated by a felt desire on the part of the organism; with the fulfillment of that desire, the situation no longer acts as a motivating force. The resulting state of reestablished equilibrium and the relief from the tension which was experienced during the process of seeking satisfaction cause the organism to respond with a sense of well-being characterized by a mild emotional state. This condition may be created by the liberation of energy hitherto used to bring about the desired solution and now finding itself unemployed, which results in a heightened vitality expressing itself in intensified general activity symptomatic of mild

emotion; or it may be brought about by the feeling of relaxation which follows prolonged and concentrated effort on a task which may or may not have been distasteful, and which has been concluded. In either case, the organism experiences this condition as pleasure. It associates the behavior form just displayed not merely with the satisfaction of the felt need, but also with the pleasurable state of heightened vitality or relaxation which follows it. The mild emotion serves in this case to intensify the motivating power of the need through whose satisfaction it was brought about, and thus the need becomes more urgent in the future because of the pleasure derived in the past from its satisfaction.

It might be assumed from the above paragraph that the organism tends to base its behavior solely upon experiences which have successfully satisfied the needs which initiated them. This is not necessarily true. Coexistent with the felt need of the moment there may be others, more basic and farther reaching, which are satisfied only if the former fails to be fulfilled. Such a powerful general need as the desire for social approval is directly opposed to the satisfaction of the specific immediate need of food-seeking if the latter entails a violation of the social code. Thus, by failing to satisfy the experienced hunger drive by stealing food, the individual derives pleasure from the fulfillment of his prestige motive. His honesty leads to control of the situation through failure to satisfy a basic drive.

For the purpose of the present discussion, it is immaterial how the first satisfying response came about. The important fact is that when such a need arises again and the means for satisfying it are again available, the individual has an experiential familiarity with the relationships between the two factors. This familiarity, of course, increases with continued experiencing, so that hit-or-miss behavior plays a less and less significant part in the organism's attempts at adjustment. Each time a similar situation presents itself, it becomes increasingly an experience involving mastery and success. Through repetitive satisfactory adjustments and progressive elimination of irrelevant and superfluous reactions, the

organism's method of dealing with the situation becomes increasingly adequate and the individual becomes more and more sure of himself.

The experience of success thus leads to increased mastery by resulting in a positive, assured attitude toward the situation involved and by releasing the mild emotional stimulation of pleasure in accomplishment which is conducive to greater effectiveness of behavior in the future.

Choosing between Alternatives

The relative potency of motives and their underlying needs determines the choice among alternative satisfactions which the organism attempts to attain. This potency, in turn, is determined partly by the urgency of the need and partly by the individual's previous experiences. There are conditions under which the need—for instance, the hunger drive—becomes so dominant that it takes precedence over all others; such is the case when the organism's reserve supply of nutritional elements is exhausted and food *must* be obtained if the tissue is to survive. In general, no amount of learned behavior or evolved motives, no obstacles within the individual or in the environment, no deterrents in the form of threatened punishment or other undesirable consequences, will be adequate to keep the organism from seeking to maintain itself in the face of impending destruction.

Again, the individual's experiences may have led him to value more highly the satisfaction derived from a more complex, socially developed need than that from a basic organic drive. Such is the case in dancing when social approval is preferred to organic gratification through direct sexual satisfaction. The underlying basic drive remains identical, but in dancing its partial fulfillment is combined with the achievement of social approval, and the resulting satisfaction experienced as more desirable than the complete fulfillment of the basic drive, entailing as it does, with unmarried couples, the probability of social disapproval. The substitution of an acceptable outlet for a more immediate satisfaction of a tis-

sue need is called *sublimation.* Through this process the individual does not deny expression to a basic urge, but conducts his energy into behavior channels which lead to the attainment of other values as well as to a partial gratification of the fundamental drive.

The prevalence of one need over others can be objectively determined on the basis of the person's expressed behavior. No reaction occurs, as should be clear from the foregoing discussion, which is not directed at the satisfaction of a motive or a basic need. Whenever the individual has the choice between alternative modes of behavior, his decision (whether conscious or unconscious) is a clear indication of the predominant need of the moment. This predominance is not static, but varies with organic conditions and available opportunities, hence apparent inconsistencies in the behavior of the same person at different times.

Frequently the concept of "will" is introduced at this point. It has been argued that a person who makes a socially acceptable and justifiable choice by foregoing immediate personal satisfactions for the sake of ultimate satisfactions affecting his own or the general welfare, demonstrates "will power," while in the opposite case he gives evidence of "volitional weakness." Avoiding such mystical concepts it can be said that the facts indicate that different motives and needs are being satisfied, or at least that an attempt at satisfying them is being made. The essential distinction between the two instances is not that the same satisfactions appeal equally strongly, and that the person with "will power" denies himself these satisfactions for some lofty, unselfish reason devoid of motivation; but rather that different satisfactions exercise a predominant appeal in each case. More than likely there is no difference between the *kinds* of motives which operate; rather do they differ in their relative *strength.* When two socially respectable men have equal opportunities to appropriate a sum of money without fear of detection, both are confronted with possible satisfactions of such motives as need for ready cash, possibilities for increased living standard, social approval, prestige, self-respect, and many others.

The fact that one of these men "resists the temptation" whereas the other "succumbs" to it clearly indicates that there are differences in the strength with which these conflicting motives operate in each case. Both men act in such a way as to seek the attainment of their dominating need, whether this be the obtaining of extra spending money or the maintaining of self-respect. The real difference is that opposite motives predominate and cause the men to engage in opposite kinds of behavior.

What remains of the concept of "will power" is that it constitutes an evaluation of behavior in terms of preconceived notions of "right" and "wrong" choices. Whenever the person expressing this judgment feels that the choice made is more socially desirable, is more consistent with the individual's best interests, benefits humanity more, or in some other way is preferable to the other possible choice or choices, he says that the individual has displayed "will power" by acting as he did. In the opposite case, the verdict is "lack of will power."

Rather than constituting a driving force or a guiding spirit which directs a person's reaction tendencies, "will power" is a stamp of approval used in evaluating overt behavior in terms of the values accepted by the person who does the judging. Naturally, this may well be the person who committed the act and who, having later changed his mind about the values involved or having undergone experiences as a result of which different motives prevail, now judges his previous act as being evidence of "weakness." A clear case in point is offered by the example of the reformed sinner who, having changed his values, now repudiates the choices made in the past. As a matter of fact, his present decisions are still made on the same basis as in the days of his darkest sinning: the strongest motive still determines his choice of behavior.

The recipe for him who would build a reputation of a man "of strong character," therefore, reads: learn what values are most generally and highly approved in your social order; then, by subjugating whatever personal motives may be inconsistent with these values, incorporate the general values into your motiva-

tional pattern. This will not be difficult, *provided such social approval of your activities is a dominant need* (and if this were not so, you would not be interested in being known as a man of "strong character").

From the educational point of view the implication is plain. Opportunities should be provided for the practice of discrimination between alternative modes of behavior in such a manner that the child discovers the advantage of choosing in accordance with the best interest of his group and himself. In the not too distant past it was believed that this ability could be developed by indirection—that "correct"moral choices could be taught by making children study treatises on morality, memorize moral precepts, and learn moral laws. It now is recognized that such learnings have little effect on the formation of behavior patterns, as the situations have too little in common with actual day-by-day experience. Only by making actual decisions between conflicting motives can the individual acquire experience in choosing wisely or unwisely. Since any choice obviously depends on the strength of competing motives it becomes the responsibility of the school to develop actual learning situations which, through experiences of the learner, will add strength to those motives which will serve better the needs of the individual and society. Abstract rules of moral conduct are being, and must be, replaced by experience in meeting moral issues, and in such a manner that desired reaction patterns will be established by reason of the satisfyingness of resultant choices of response.

Forming Habits

Satisfying experiences tend to intensify the organism's awareness of a need. This is a progressive process, since repeated satisfactions make the motive more dominant. Habitual modes of responding are thus seen to become more firmly established as the person's experiences with the consequences of these behavior forms become more extensive. The more frequently satisfying results are obtained, the more eagerly the individual seeks repeti-

tions of these experiences. If the objection is made that socially undesirable habits also become firmly established with repetition of response, it should be remembered that such habits also entail desired consequences, though these may not be obvious on casual inspection. Nail-biting, excessive smoking, and all other "bad" habits obviously serve purposes other than those indicated by their superficial effects. They provide satisfactions for some needs, perhaps help the person to escape from the necessity of facing reality, and thus are engaged in despite their apparently undesirable aspects. The former, in the individual's estimation, obviously outweigh the latter and thus provide the stronger motives. Not until a reversal of values occurs will a habit be discontinued, since the organism invariably responds with the behavior form which at the time appears to hold the greatest amount of potential satisfaction.

It must be clearly understood that the mere *repetition* of an act is not the determining factor responsible for its incorporation into the individual's habit patterns or for its rejection; but, rather, the *effects* of the response cause it to become habitual. Repetition of an act may lead to its elimination as well as to its habituation, depending on the obtained results. The purposive performance of a reaction having an unpleasant effect which is stronger than the pleasure derived therefrom results in a decreased desire to perform that reaction. In other words, habits may be broken as well as established by repetition—the outcome depending on the desirability of their effect. A person who has developed the nail-biting habit does so, obviously, because it serves a certain need. Now if he develops a motive—say, social approval—which gains dominance over any other need that may be served by continuing this habit, his purposeful continuation of the activity, leading to unwanted consequences in the light of his now dominant motive, helps to break down the strength of the needs which formerly led to establishing the habit. This technique of breaking an established habit, sometimes referred to as *catharsis*, is effective only when the motivation *not* to perform the act is prepotent over any contrary desire to continue the habit.

With strong motivation, a few repetitions may suffice to establish a habit, while in the absence of motivation many repetitions often remain ineffective. This is one of the foundation stones of modern education and the basis for adverse criticism of the so-called drill system. Not that habits cannot be acquired by this drill if the teacher is persistent enough, but the cost in terms of wasted energy is wholly disproportionate to its effectiveness. Moreover, the coercion necessary to bring about learnings which, apparently, do not serve the pupil's needs, not only fails to bring about the joyous experience of success which is conducive to further exploration in a particular curricular field, but may lead to an actual dislike of it. It is very apt to develop a feeling of relief to "have it over with," and may result in resentment against the subject area, the coercing teacher, and the whole system of education.

In contrast, the same materials often may be utilized in such a manner that they aid in the satisfaction of the pupil's present needs and, consequently, eliminate the need for coercion and an excessive number of repetitions. Purposive learning becomes a satisfying experience because the children feel that they "have gotten something," and the pleasurable learning experiences in the specific curricular area lead to their desire to investigate further the possibilities of that and related fields.

A particular pupil may find a study of the state constitution a distasteful and purposeless task when conducted in a formal, lesson-assignment manner and may have great difficulty in memorizing its provisions in spite of long hours of study. The same student, however, when studying this document to gain information needed by his group in the dramatization of the state legislature in action may find the constitution both interesting and not too difficult to understand.

The problem of developing desirable habits revolves around our ability to associate with them consequences which fill an experienced need. No amount of abstract reasoning will suffice to make appear less desirable a response from which satisfaction is derived. Consequently, only when an alternative mode of re-

sponding becomes more desirable in its consequences will the former habit be eliminated without great difficulty. Normally, the breaking of old habits is much harder than is the establishment of new ones. In the past these habits have been satisfactory, and the desirability of replacing them with different behavior forms is not readily granted unless the latter serve the individual's needs in an obviously superior manner. To one who has learned to type with two fingers, for instance, the ten-finger or touch system does not come readily because the former habit has served him well. The touch system of typing would have been acquired more easily if facility had not already been acquired with two fingers. In replacing old with new behavior patterns, the individual has the dual task of establishing new and repressing old habits, which is the more difficult when his experience with the latter has been both extensive and satisfactory.

Therefore, through education attempts are made to provide experiences leading to the development of habits which are desirable from the individual and social point of view, and to do so before undesirable counter-habits have been acquired. In many instances the schools operate at a disadvantage because undesirable behavior patterns often have been established in preschool experience. This again is a strong argument for parent education designed at bringing about closer relationship of the child's early environment and the purposes of education.

Developing Interests

Not only does the experiencing of successful achievement lead the organism to seek a repetition of the satisfaction derived therefrom, but it arouses the expectation of similar results from related experiences. Mastery of a physical skill results in an attempt to master other physical skills; successful achievement along the given line of endeavor leads to attempts at further accomplishments in the same or related fields of learning. Thus, the development of an *interest* has its origin in successful adjustment to a situation and results in the desire to obtain similar satisfactions from similar

situations. Such experience does not lead to a static condition in which the organism continues to repeat precisely the same behavior form under identical conditions. On the contrary, it leads to a constantly expanding series of reactions in which attempts are made to derive the same measure of satisfaction from a never-ending variety of ever-new experiences. Reading a book from which pleasure is derived does not result merely in a rereading of the same book with the expectation that an equal amount of pleasure will be obtained (though such might easily be the case with certain books for a limited number of repetitions), but also stimulates a desire to read other books by the same author or dealing with the same subject. Although under favorable circumstances much enjoyment comes from hearing the same symphony again and again, this satisfying experience also results in a desire to hear other symphonies and, perhaps, other forms of musical composition. Interests, though resulting from individual successful experiences, tend to expand progressively and to become the bases for still more and varied related experiences. Such motives tend to become progressively complex as proficiency is gained in more aspects of a given field. An illustration will make this point clear.

Mary comes from a home in which the parents are greatly interested in the several phases of art; consequently, Mary has had many opportunities to hear good music and to enjoy good paintings. She has attended numerous musical presentations, and has visited art exhibits from time to time. Under the guidance of a wise mother these experiences have proven satisfying, and Mary's interest in and appreciation of art and music have grown steadily. In school, Mary has been equally fortunate, attending a school known in the community as being rather progressive, a school, in fact, which at times has been criticized for its rather definite break with traditional procedures and materials.

Throughout a period of several years Mary has been encouraged to express herself through creative paintings and to compose her own songs and music. By the time she completed the elementary school she had not only had opportunities to enjoy the art and

music of the masters, but had herself experienced the problems, discouragements, and successes growing out of her own creative endeavors in these fields. Not only have her appreciative abilities developed far beyond the great majority of individuals of equal or even greater potentialities, but she has developed considerable skill with paints, can read music readily, and has composed some remarkably fine music herself. What began as the early "gurgling" of a two-year-old over an animal picture book or the scribblings on the wall with big brother's crayons has now grown into a most complex behavior pattern. Successful achievement within her level of understanding, with situations growing more and more complex as she developed in her appreciative ability and in her own skill in the techniques of self-expression, has resulted not only in continuous growth in these areas of learning, but in increased desires for further learnings in these and the related fields of drama and poetry.

Unsuccessful or definitely unsatisfactory experiences in her early years, such as being forced to spend long hours in unmotivated drill memorizing names of paintings and painters, making color charts, learning to sing by note, and developing other technical skills under circumstances lacking intrinsic motivation, might easily have resulted in Mary's developing a definite distaste for the aesthetic areas of learning which she now so thoroughly enjoys and in which she has developed a high degree of technical skill.

The fact that some individuals go through life developing few new interests, that some apparently are content to repeat over and over again the same experiences from which they once derived pleasure, is not a result, as is often assumed, of their having learned to do these things so well that they do not feel the need of broadening out into other fields. Rather have they "settled down" to routine behavior patterns and no longer seek the gratification they once obtained or attempted to obtain from expanding experiences. Thus, the traditional Babbitt is a person who has played with certain experiences enough to derive some measure of satisfaction, but has never gone beyond this to ultimate utilization. He is will-

ing to remain at an elementary stage because he has not tasted the complete success of knowing fully about his work or hobby. If the experience becomes drained of all the satisfaction to be obtained from it and he is ready for further experimentation and investigation, he is no longer a Babbitt.

An examination of the lives of "successful" and "average" people leads to the discovery that the activities of the former almost invariably cover wider areas of learning experiences, regardless of the criterion of success used in their selection. The industrial wizard and the busy newspaper publisher may collect art treasures or a library of incunabula; the eminent physicist may develop his talents as a violinist and give freely of his time to any cause aiming at social betterment; an important executive may collect stamps and ship models; one of the most prolific authors may be a skillful musician or a painter of note; a superfinancier may become an expert at raising fancy flowers. By contrast, many a bank clerk, salesman, mechanic, and storekeeper "never seems to find time" for reading, enjoying music, art, or even sports. What is lacking, of course, is not time, but motivation.

The Effect of Failure

Since the development of habits and interests in a field of learning depends upon the opportunities for satisfying experiences in that field, it follows that in the absence of such opportunities the organism has no basis for becoming interested or for developing desired behavior patterns in that experience area. Such is the case when the environment does not contain adequate stimulation, due either to an actual scarcity of exciting conditions or to the fact that the opportunities are not commensurate with the person's maturational level. Failure to develop an interest and an adequate skill in reading, for instance, may result from the actual inability of the child to read the materials at hand, from an absence of sufficient reading materials of a challenging nature, from psychologically poor teaching procedures, or from several other factors.

The outcome of such failure, however, goes far beyond the mere absence of skill and interest in reading. It may result in a belief that he can never learn to read and may lead to a distrust or dislike of those who, unlike himself, have developed such an interest or ability. The desire to be like others is an important motive in determining behavior; the feeling of being different in some important respect often results in an antagonism directed at the others rather than at oneself. Thus, failure to attain success is not usually, in itself, hurtful, unless it affects the basic needs of the organism directly. What *does* hurt is the success of others, combined with the ego-deflating comparisons with one's own lack of ability. Inability to form an opinion concerning the theory of relativity is not experienced as failure by a six-year-old, because it neither involves his basic needs nor distinguishes him from other six-year-olds. But the same child is keenly aware of his failure to understand the rules and techniques of a game which his playmates have mastered. This inability excludes him from their inner circle, and he is not permitted to play with them because of it. To the youthful factory worker, inability to afford evening clothes constitutes no problem; in fact, this tends to give a feeling of definitely belonging to a social group with which he is identified and thus leads to pleasure rather than a sense of failure. To a youth in college, however, this inability may spell the difference between acceptance and rejection, and he is keenly aware of the "humiliation" resulting from his failure to adjust to the accepted customs of his classmates. Inability to obtain an object or to develop certain skills or concepts is experienced as failure only if the organism's felt needs or the individual's objectives are adversely affected.

This implies that the experience of failure depends on the person's *concept* of his needs and his abilities. To a patient with delusions of grandeur, inability to gain mastery over millions of people constitutes failure just as realistically as the inability to learn walking constitutes failure to a paralytic. Fortunately, the former usually satisfies his needs with fanciful successes, and his experience of achievement based on imaginary accomplishment

is as real and significant to him as is that of the paralytic victim who, after long treatment, succeeds in taking his first few steps with the aid of a pair of canes.

In determining the amount of satisfaction or the extent of failure experienced by an individual, the objective accomplishment is immaterial. What counts is the achievement of, or the failure to achieve, objectives which the individual considers worth while and within his grasp.

It has been emphasized that successful experiences lead to the desire to experience further successes by coping with similar or more complex situations. This applies inversely to failure experiences. The individual whose self-confidence has been undermined by his inability to attain an objective which he considered important tends to include in his failure experience situations related to that in which he failed. A child who has been unsuccessful in developing an understanding of certain mathematical concepts which have been adequately learned by his classmates revises his estimate of his own ability to the extent that he believes himself incapable of mastering mathematical materials. Furthermore, such experiences may lead to lowered self-confidence in respect to very different situations. Frequent failures may result in an acceptance of these failures as an indication of his general inferiority in comparison with others. This reevaluation of himself results from the tendency of failure experiences to spread to related situations and in this manner to lead to a lower self-confidence not restricted to the specific situations in which failure took place.

In the same way that repeated failure to master particular skills may result in a sense of inadequacy which gradually spreads to include not merely related skills but many unrelated activities of the individual, it also serves to prevent the development of interest in the particular subject matter, in related materials, and, often, in the whole "system" as well.

This situation leads modern educators to emphasize the necessity for developing desirable interests by providing opportunities

for successful experiences and by preventing failure from occurring. This, of course, in no way implies that schools ought to eliminate difficult subject matter from their curriculums. It implies, rather, that activities and materials must be commensurate with the pupil's level of maturation and previous experience, and that the functional rather than the "logical" approach must be a basic principle of curricular organization. Furthermore, it is a strong argument against exposure to new experiences before the child possesses the proper experiential background and interest in further exploration which together are indispensable for successful achievement in new learning situations.

Refusing to Admit Failure

Repeated failure to learn in the highly competitive situations of the conventional school may cause the child to admit his inability to keep up with the others. However, such an admission generally is damaging to his self-respect, and a way often is found whereby painful failure experiences can be avoided without surrender of self-esteem. This may be achieved by any one or all of the various escape mechanisms which enable the individual to run away from undesirable situations. He may revise his evaluation of his needs and maintain that the task or material which he cannot master is not important, anyway, and that it is a waste of time to try to learn it. Thus he avoids the necessity of demonstrating his lack of proficiency in competition with others and at the same time succeeds in maintaining his status in the eyes of others and himself. The slow reader may claim that he can get along very well without learning to read as well as the better readers in his class and, indeed, without competing with them in other subjects in the school. In this way he accounts for his failure, not on the basis of lack of ability, but by reason of lack of interests and needs comparable to theirs. This process of *rationalization* demonstrates to the individual's own satisfaction why he *should not* succeed, and camouflages the reasons *why* he has failed.

A similar purpose is served by shifting responsibility for one's

failure to other persons or to conditions over which one has no control. Low-grade accomplishment may be attributed to the fact that the teacher "has it in" for the child, that the individual never had a "break," was "picked on," discriminated against, and otherwise hindered from demonstrating what he really could do. Again, the child may reason that he would have been more successful if he had not been sick, forced to help on the farm or around the house, obliged to sell papers after school, or seated in the back of the room where he could not see the blackboard.

These two types of rationalization, often referred to as "sour grapes" and "projection" mechanisms, respectively, protect the individual against loss of prestige and moral defeat. No one could expect a child to be a success or hold him responsible for failure when the work isn't congenial to him, when his teacher is "against" him, when he isn't well, or has to work long hours after school. No attempt is made to conceal the inadequacy, but its stigma is removed by offering plausible "explanations." In effect, the child is saying: "Of course, I could have succeeded as well as anyone else, only. . . ."

Another way in which failure may be made palatable is by *compensation,* either in the field in which the admitted inadequacy occurs or in another field. Thus, a child having difficulty with arithmetic may devote a disproportionate amount of time to this subject and succeed in overcoming the deficiency at the expense of other achievements; or he may counterbalance it by concentrating on some such activity as basketball and, by achieving prominence in that field, attempt to even the score. In either case there is a tendency to overcompensate and attain disproportionate development. Many cases of juvenile delinquency may be attributed to the attempt to compensate for failure in school activities by drastic efforts to obtain prestige in extraschool activities. Instead of accepting his deficiency and suffering the consequences, the child engages in acts of daring and adventure in order to demonstrate to himself and to the members of his group that he has ability, even if he does not show it in his schoolwork.

Compensation is the mechanism involved in the case of the sickly child who, unable to compete on the playground and the sand lot, seeks social recognition and self-respect by becoming an unusually capable and often docile student or, on the other hand, by developing into a "bad" boy who pulls little girls' hair and draws funny portraits of the teacher on the blackboard.

Other children, incapable of keeping up with the group, may be unwilling to face reality, and deny to themselves and others that they are inferior. Consequently they create a fanciful series of imaginary success experiences which they substitute for their failures. They succeed in escaping from loss of self-respect and prestige by manufacturing a dream world of their own in which they continuously experience the joys of achievement, and which to them constitutes reality, giving them satisfactions unknown in real life. *Daydreaming* enables the child to be a hero in a world of his own making, in which failure does not exist because he does not *wish* it to exist. It is small wonder that he grows to love it better than his drab, everyday environment in which the competition with his fellows has been the source of so much dissatisfaction and unhappiness.

These defense mechanisms, which are essentially attempts to attain the satisfaction of social needs and integration not provided by real experiences, are utilized by almost everyone at times. They serve to see the person through a critical period during which a frank facing of reality would mean loss of self-respect. As temporary emergency measures they have a certain utility. They become dangerous when the individual becomes addicted to them. It is one thing to fancy oneself a success after experiencing a serious setback and to use this imaginary satisfaction as additional motivation to actual effort intended to overcome the obstacle; but it is quite a different matter when the spurious mastery achieved in revery becomes a subsitute for real achievement and obviates the need for further endeavor. It is probably correct to say that seldom are extremely difficult objectives attained without first having been achieved in the imagination of persons faced with seem-

ingly insurmountable obstacles. However, these imaginary accomplishments have constituted additional motivation toward real achievements rather than being substituted for them. Daydreams thus may serve to make the goal more real; they also may take the place of seemingly unattainable goals.

When escape mechanisms become habitual and generalized so as to envelop all or most of the person's behavior, more serious maladjustments may result. These are discussed in a later chapter; for the present it suffices to say that the criterion of whether such habits have become injurious to the organism's integration lies in their relation to reality. If the contact with reality has been destroyed and imaginary experiences are accepted in its place, grave consequences will follow and may destroy the individual's social and personal effectiveness. In the opposite case, the mechanism serves the purpose of lessening emotional shocks which otherwise might be too difficult and painful for successful adjustment.

Adjusting to Inevitable Inadequacies

Instead of choosing any of the above escape mechanisms to avoid the necessity of admitting inferiority, the child may accept the situation at face value and, if necessary, revise his felt needs and hoped-for satisfactions accordingly. A crippled child, rather than develop a sense of inadequacy which eventually may affect and warp his entire personality and social adjustment, may accept the limitations that have been placed on him. Maintaining his awareness of proportional values, he will grant the fact that he cannot hope to compete with his friends on the athletic field or on the dance floor; but, without bending every effort toward outdoing them in an attempt to overcompensate in other fields, he will not surrender his right to be their equal in activities not connected with locomotion. In foregoing the satisfactions to be derived from behavior forms which he cannot master adequately, he will seek pleasure in attaining the fulfillment of his social and integrative needs in those fields open to him. In this way, the child achieves *adjustment* by facing the situation squarely, making an

inventory of his assets and liabilities and using the former to offset the latter.

This represents the usual way in which the normal person adjusts to the realities of life. It should be obvious that no one can excel in all respects; it is equally clear that practically all of us can do some things at least as well as most people. The recognition and acceptance of limitations is essential to effective adjustment, while refusal to recognize them leads to dissatisfaction and disillusionment. Probably no more dangerous slogan has been promulgated than "hitch your wagon to a star." The fallacy is that stars often are too far outside the atmosphere in which most of us exist to serve effectively as guideposts for our behavior. Also, there is great danger of clouds drifting between the stargazer and his hitching post, leaving him at a complete loss as to the direction in which to move. Little or nothing is to be gained by setting up goals for oneself without due consideration of one's assets and liabilities as well as opportunity for success. Too lofty aims interfere with rather than promote accomplishment because they often make impossible the experience of success, which is the strongest motivating force for future achievement.

Psychologically preferable is the system of setting up a succession of goals in which the attainment of each constitutes additional motivation to proceed to the next. Human motivation is strengthened when the immediate goal is near enough so that the experience of success in reaching it may constitute an added incentive to proceed to the next immediate goal. This does not mean that an ultimate objective may not be kept in mind; but this in itself often proves inadequate because of its remoteness. From the vantage point of a conquered obstacle the next hurdle looks less formidable.

No "smart" manager of a promising young boxer, for instance, matches his protégé with greatly superior fighters during his early matches, but rather builds him toward the ultimate championship by setting up a series of goals, each in the form of a slightly better boxer than the last man from whom a decision was won. Con-

centration in each case is upon the next fighter to be mastered rather than upon "the Champ." To do otherwise may cause his fighter to take such a beating, or series of beatings, that he loses heart and is relegated to the long list of failures who have tried to climb too far too rapidly.

Making the Most of the Situation

The Physically Handicapped Child

Little is to be gained by encouraging the physically handicapped child to act as if he were perfectly normal. This attitude can lead only to a refusal to accept reality, since it is perfectly obvious to him that his disability distinguishes him from other children. Emphasis, rather, should be placed on his making the most of his abilities and on not allowing his admitted deficiency to interfere with his full development in other respects. Permitting the hard-of-hearing child to be in the same schoolroom with children whose hearing is normal may be greatly to the disadvantage of the former, since his handicap is a real one which makes it impossible for him to keep up with the others, unless special provisions are made for him. However, when enrolled in a special class consisting only of individuals in the same condition, he is placed with his peers and with them can solve the common problem of adjusting to living in a world in which they are defective. Within his own group he will achieve successes which would have been denied him had he been assigned to a normal group. Under the guidance of a specially trained teacher such children may develop skills and attitudes which will make them useful citizens within the limits provided by their deficiency.

The decision of whether or not a specific case requires segregated treatment must, of course, be made on the basis of a thorough understanding of a person's needs and physiological condition. The extent of the abnormality, his social and integrative needs, his intelligence and previous experiences, must be taken into consideration. It is possible that when the total picture is thus obtained

it may appear advisable to retain the child in the regular classroom and supplement his experiences by special outside training. Often necessity will dictate such a course because of lack of facilities for special training. Whatever program of adjustment is adopted, it should provide the deviate with means whereby he can make the most of those aptitudes at his disposal and obtain the greatest possible satisfaction of his felt needs. He should be encouraged to regard his needs in the light of his capacities and, when necessary, to modify them on the basis of his recognized limitations, without allowing these defects to assume disproportionate importance in his scheme of life.

The argument in favor of retaining children with serious defects in the regular room is that it will accustom them to live in a situation similar to that existing for them outside the school room. Since they must live, and at times compete, with "normal" individuals in present out-of-school situations, and later in the occupational field, much may be said in favor of this point of view. Under the guidance of a specially trained teacher, and under a classroom curriculum adjusted to the pupil's needs, an unsegregated school situation is generally preferable to segregation. Extreme deviation, however, such as blindness or complete deafness, normally requires segregation for an effective educational program.

By encouraging the unusual child to look upon himself in the same light as others, a person with certain assets as well as certain obvious handicaps, the teacher may prevent the development of much of the negativistic attitude, the antagonism, and attempts at rationalization and escape which too often are characteristic of such an individual.

The Normal Child

The real difference between so-called "normal" and "unusual" children is not in the existence or lack of limitations, but rather in their *nature* and *extent.* After all, it is *normal* to be *different* from

others. George and Albert are both "normal" boys in a modern small city high school. George, however, has considerable difficulty in academic types of learning situations and, consequently, avoids taking such courses as physics and foreign language. He does, however, possess considerable ability in the arts and crafts and is an outstanding athlete. He has developed a sensible understanding of his strong and weak points and has planned his high-school program accordingly, so that he is leading a normal and happy school life. Albert, on the other hand, is exceptionally capable in the academic fields and is an honor student. He plans to enter college at the close of his high-school career to study medicine. Physically, Albert is just an average boy and, while interested in sports, has never been able to make a high-school team and earn his letter. Secretly he is a bit envious of George, for whom he has a great deal of respect. George, on the other hand, often wishes he had Albert's brains to go with his own athletic body. Under wise counseling, and with a fairly adequate curriculum, both boys have been able to plan their high-school programs in line with their interests, needs, and abilities. George is president of the Letter S Club; Albert is president of the Science Club. Both boys are socially popular and are prominently mentioned as possibilities for senior class president.

In the above illustration, which is by no means hypothetical, both the school and the boys concerned have recognized inequalities of ability as the normal thing. Satisfactory adjustments have been made so that each boy is developing a well-integrated personality and is making the most of his capabilities, while recognizing that there are certain fields in which he cannot hope to excel or even equal the achievements of the other. In the highly academic, college-preparatory high school of a few years back, George probably would have been flunked out during his freshman year, unless the appeal of athletics became a strong enough motive to drive him to the many subterfuges necessary to at least "get by" and keep eligible. In either case his attitude toward the school

and teachers most likely would have been highly unsatisfactory. Also, he would have been almost certain to have taken refuge in one or more escape mechanisms so common to the individual placed in situations where successful achievement is practically impossible.

Educational Experiences

It has been shown that the satisfactions derived from successful experiences tend to lead to a desire for continued satisfactions from further like experiences. Also, an experience to be satisfying must be related to the felt needs of the individual and commensurate with his maturity level. Not all experiences falling into this category, however, constitute educational experiences. If a boy has learned the technique of a game and has developed such skill in it that, no matter how often he plays the game, he cannot improve his performance, this activity no longer has educational value. So long as a succession of successful experiences resulted in improved mastery in this or in related activities, the activity properly could be called educational. When the performer reached a plateau in his learning so that increased practice no longer resulted in more adequate behavior, the activity ceased to be educational and became purely routine. To be classed as educational, then, an activity must lead to continuous modification of behavior consistent with the changing needs of the learner. If studying Latin results not merely in learning grammatical rules and developing a vocabulary, but in the development of skills and aptitudes which can be utilized in the learning of other languages for which the child has a need, or if it aids in developing attitudes conducive to further learnings, then indeed it constitutes an educational experience. If, on the other hand, it has no demonstrable effect upon later learnings, or if the child has no future need for learning another language, then studying Latin is an isolated experience serving no known present or future need and hence devoid of educational significance.

Obviously, the learner seldom is in a position to determine whether certain experiences will lead to the attainment of ultimate satisfactions; he knows only whether they apparently satisfy a present need. Some extremists in education have overlooked this distinction and have permitted children to choose activities on the basis of present needs alone, thus failing to see that many of these activities had little or no real educational value. Education is a continuous process consisting of a pyramiding of experiences upon successful previous experiences, so that adequate provisions must be made to ensure an uninterrupted growth based on experiential continuity. Any activity which is out of line with this development by reason of lack of "lead-on" value cannot be called truly educational, however pleasurable it may be at the moment.

To say that each child knows best what he ought to do is to deny the value of experience, which is the foundation stone of all education. By virtue of greater maturity and more varied and complex experience, the teacher should be in a unique position to determine which among the many available activities constitute educational experiences leading to further growth of the child. His understanding of the needs and abilities of the members of the group entrusted to his care should enable him to lead his pupils into situations which fit in with their present interests, which evolve from their past experiences, and which will contribute to the satisfaction of future needs. To do otherwise means the substitution of hit-or-miss practice for planned, integrative experiences and is psychologically unsound.

The determination of pupil needs at various maturity levels, the development of ways and means of measuring abilities and aptitudes, and the provision of truly educational experiences consistent with these findings are among the major problems of education, including educational psychology. The contributions which psychology can make to the solution of these problems and the educational practices essential to such solution will form the basis for the remaining chapters of this book.

SELF-EVALUATION EXERCISE

Section I

Directions: The items below relate to the discussion of the effects of success and failure. Each item consists of a statement of a problem or a psychological fact requiring completion by the selection of one of the three possible phrases, clauses, or sentences listed as *a, b,* or *c.* Read each item carefully, then do the following:

1. Select the phrase, clause, or sentence which best completes the statement or which provides the best answer to the problem of the item concerned.
2. Write down the symbol of the "best answer" (*a, b,* or *c*) on a sheet of paper, together with your reasons for selection, for each item of the exercise. Tell why you believe the answer you selected to be better than the two you rejected.

The fact that one of the three possible answers to an item is considered to be the best answer does not mean that the other two necessarily are wrong or false. Such may be the case; however, it may be that the "best answer" merely is more nearly complete than either of the other two, or that it is more in harmony with modern psychological thought. Remember, don't search for "right" and "wrong" answers or completions to an item, but, rather, for the *best* one of the three possible choices.

1. Zelda-Ann, an infant of six weeks of age, is crying lustily and is flailing the air with arms and legs. Knowing nothing of the causal stimulation,
   a. the best guess is that the child is angry and, consequently, reacting in the only manner that an angry infant can act.
   b. it is fairly safe to conclude that the child is hungry and is trying to convey that idea to the general public.
   c. one can conclude only that there is a disturbance within the organism resulting in generalized activity, but which

might be a result of any number of factors—physical discomfort, hunger, fear, or a vague desire to be fondled.

2. Two boys, each ten years of age, are facing a situation where a decision must be made. Each has "standing orders" to come home directly upon dismissal of school. Each wants to stay with the gang and play touch football. After some consideration Jimmie decides to play football; Bill decides to go home. From a psychological point of view the best explanation for their behavior is:
   a. Decisions were made by each in terms of greatest satisfactions. The joy of a football game outweighed the possibility of home disapproval and probable punishment for Jimmie. The reverse was true for Bill.
   b. Bill is a boy of stronger will power than Jimmie, and consequently he made the decision of "right" rather than "wrong" behavior in deciding to obey his parents, even when he preferred to do otherwise.
   c. Jimmie is a boy of greater courage than Bill, as he is not afraid to risk punishment, while Bill is.
3. Mr. Johnson is superintendent of a small city school system. He believes thoroughly in the maintenance of high standards of achievement and has ruled that students will not be graduated from the elementary schools until each is able to make scores on a nationally standardized achievement test equal to the average scores of eighth-graders at the end of nine months in that grade. It is recognized by teachers and principals that some children just naturally will have to be "passed" in time as they never will achieve such standards, but in general the policy is carried out faithfully. From the point of view of its effect upon children,
   a. the policy is sound psychologically as it engenders respect from all or most pupils for the high standards of the school system. The great majority of the children will be proud that they were graduated from a school that was "tough" to get through.

b. such a policy will result in greater effort on the part of the children as they know they can't loaf and get through school. It engenders good study habits and prepares children successfully to meet the competition which is so characteristic of all American life.

c. the practice is in direct violation of certain psychological principles of effective learning, especially in its effect upon the pupils of lesser academic ability, and undoubtedly results in very poor attitudes on their part toward both school subjects and school personnel.

4. Josephine, a junior-high-school girl of considerably less than average academic ability, has received a failing grade in her English class. She is something of a behavior problem in class and often is severely reprimanded by the teacher. She has come to the conclusion that the teacher doesn't like her and that she will be failed regardless of the quality and quantity of her work. Josephine is applying an escape technique known as—

a. catharsis.

b. rationalization.

c. compensation.

5. Mrs. Allen, an elementary-school principal in a small town, believes that much of the first-grade learning activity should be devoted to drill on the so-called essential combinations of arithmetic. Psychologically speaking,

a. this process is sound. Little children learn more rapidly through drill and find it less tedious than at a later age. Also, this drill is essential to establish skills so essential to later success in arithmetic.

b. it has been well established that such combinations cannot be established through such drill. Therefore the system is doomed to failure as it is contrary to all learning principles.

c. Mrs. Allen has mistaken ideas of principles of learning. The children will learn more efficiently, for instance, if they

spend their early primary years developing mathematical concepts through experiences in which there is a need for mathematical thinking, with practice on processes coming later in their elementary-school career.

6. Jeffrey is a child of below-average academic ability and is experiencing great difficulty in learning to read. There is a directive in the school that no child shall be passed to the second grade until he has demonstrated his ability to read certain specified books. It is now near the close of the school year and Jeffrey's teacher has about despaired of his learning to read even the primers, and this in spite of hours of patient instruction on her part and drill on the part of the child.
   a. From a psychological point of view the above practice in teaching reading is likely to do more harm than good, as Jeffrey is very apt to develop the belief that he cannot learn to read and probably will become one of the many children who "don't like reading."
   b. The practice is to be recommended as, after all, the chief purpose of the first grade is to teach reading. Children cannot be expected to do the work of the second grade if they have not learned to read first-grade readers.
   c. This is a definite indication that Jeffrey has been allowed to start to school too soon. Normally, a child should be kept at home until he has reached a stage of mental maturity where the learning of reading is possible without undue waste of the efforts of both teacher and pupil.

Section II

Directions: The following items relate to the effects of success and failure. Some of the statements and described situations are in harmony with modern psychological thought; others are not. On a separate sheet of paper write the word "agree" if you believe the statement or the described situation to be in harmony with modern psychological thinking, or "disagree" if you believe other-

wise, together with reasons for your agreement or disagreement.

1. A basic and acceptable principle of learning is the so-called "law of exercise" which implies that learning takes place primarily through repetition of an act, combined with satisfactory results of the act, and is achieved through strengthening the bond between a given stimulus and the particular reaction.
2. Ben has received a long arithmetic assignment to be completed before the next morning. There is a show in town which his parents had promised him he could attend if he didn't have homework to do. He is faced with the alternative of missing the show but coming to school with his arithmetic completed next morning, or of concealing the fact from his parents that he has a home assignment. If he chooses the latter reaction he will have the pleasure of the show, which he badly wants to see, but must risk the displeasure of the teacher in class next morning. If Ben has had proper rearing he will remain at home to work his arithmetic, as he will have been conditioned to obey and therefore cannot be expected to act otherwise.
3. The attainment of a goal by an organism normally results in a removal of tension, bringing with it a feeling of satisfaction through either heightened vitality or relaxation. This in itself tends to cause the organism to seek additional experiences of an identical or similar nature in the future, or to react in an identical or similar manner when again faced with a like stimulating situation.
4. In a stimulating situation the "randomness" of an organism's reactions is proportionate to the novelty of the situation. Consequently, the more varied a person's experiences, the less he will find himself in situations where pure hit-or-miss behavior is necessary.
5. All of the teachers in school *X*, a small elementary school, are agreed that socially undesirable acts must be met with immediate punishment by the teachers most directly concerned,

as such acts, if allowed to go unpunished, will in themselves lead to repetitions of the undesired behavior patterns.

6. It is entirely possible, by bringing about a change in values within an individual, to create a situation where repetition of a particular act will, in itself, result in dissatisfaction with the behavior pattern and, consequently, in its ultimate elimination.
7. Learning is very specific in its nature. Therefore George, who has learned to enjoy himself greatly through self-expression in painting, will not thereby have any increased interest in other mediums of art expression.
8. Socially desirable habits are more difficult to establish if their establishment requires the breaking of already habituated reaction patterns. Consequently it will be more difficult for Norma to learn other ways of getting permission from her parents to do things she wants to do if in the past she has found that tears usually get her what she wants.
9. Harrison's parents were both accomplished musicians. Harrison, however, was left an orphan at the age of two when his parents were killed in a train wreck. He was placed in an orphanage with little or no opportunity to develop his music potential during his childhood and early adolescent years. In spite of this lack of opportunity for musical experiencing he is almost certain to become a musician when he gets out on his own, as he will have an inner drive for music which he will not be able to resist.
10. Jerry is a child of six years of chronological age, but with considerably less than average mental maturity as measured by an individual "mental test." He comes from a home where there is very little reading done by the adults of the family; consequently, he has developed no particular need for reading. In school he immediately is plunged into a heavy program of reading instruction, but after a year of very discouraging work by both teacher and pupil he still has made very little progress, nor has he developed any great desire to learn to read. From

a psychological point of view one can hardly say that Jerry has experienced failure, although the teacher certainly has experienced failure in the project.

11. Daydreaming is an avoidance technique which undoubtedly will lead to an unwillingness to face reality. Consequently, it should not be engaged in to any extent if one desires to lead a normal life and to accomplish one's goals.
12. Joe is a boy of considerable academic ability and always gets high grades in this type of work. However, he never has been strong physically and is unable to make any of the athletic teams, in spite of his very great desire to do so. He has come to the conclusion that he could make some of the teams if it were not for his physical condition, but that under the circumstances there is very little use of his trying further. This is a rather dangerous form of "rationalization" and should be discouraged.
13. It often is desirable to segregate extreme deviates, such as blind or deaf children, from other children for instruction as their defects are so great that successful achievement in school is most difficult, if not impossible, unless they are placed with others of like deficiencies and given instruction suitable to their needs.
14. Normally, the present day-to-day needs of children are adequate guides to the learning activities within the classroom.

SUGGESTED READINGS

Burnham, William H.: *The Wholesome Personality,* D. Appleton-Century Company, Inc., New York, 1932. Chap. XII.

Dodge, Raymond, and Eugen Kahn: *The Craving for Superiority,* Yale University Press, New Haven, 1931.

Hopkins, Thomas L.: *Integration, Its Meaning and Application,* D. Appleton-Century Company, Inc., New York, 1937. Chap. IX.

Klein, D. B.: *Mental Hygiene,* Henry Holt and Company, Inc., New York, 1944. Chap. XVI.

Prescott, Daniel A.: *Emotion and the Educative Process,* American Council on Education, Washington, D.C., 1938. Chaps. VI, VIII.

Wallin, J. E. Wallace: *Personality Maladjustments and Mental Hygiene,* McGraw-Hill Book Company, Inc., New York, 1935. Chap. VI.

CHAPTER VI

Guiding Pupil Experiences

PROBLEMS

1. Why is intrinsic motivation superior to extrinsic motivation?
2. Why has the conventional educational program become so dependent upon extrinsic motivation?
3. What type of motivation is characteristic of an educational program that grows out of the needs of the learner? Explain.
4. What is the leadership, or guidance, function of the teacher in the modern school? Why is adult guidance in the determination of school learning activities essential?
5. Why is it so essential that the teacher of today should have a thorough understanding of the social as well as biological needs of the pupil?
6. What is a psychologically defensible concept of the doctrine of pupil interest?

DISCUSSION

Educational Points of View

Activity, as we have seen in the course of preceding chapters, is based upon the individual's organic and social needs, which pro-

vide the essential motivation for his behavior. Education, if it is to be effective, must be in harmony with this basic process. An increased recognition of this principle has resulted in great modifications of the educative process in recent years, with even greater changes presaged for the immediate future.

While there are certain objections to citing extremist positions in illustrating a point, doing so does have the advantage of setting an idea out in relief. A brief discussion, then, of extreme conservatism or *traditionalism* on the one hand and so-called *radical progressivism* on the other seems justifiable, even though they are seldom found in the pure state in the public schools of the United States today. These will be compared with the moderate progressivism of the better schools of the present time.

Traditionalism and the Educative Process

In general, the traditionalist holds that the organization and presentation of subject matter in the schools should be governed solely by the systematic integration effected by mature experts. Consequently, an orderly sequence of topics is provided ranging from the "simple" to the "complex" and related internally by "logical" coherence. The complete curriculum constitutes a balanced whole in which all the parts have their well-defined functions and hence are essential to the structure as a whole. This inevitably means that none of these parts can be replaced by others, regardless of their individual merits, because this procedure would destroy their relation to the whole. Traditionalism, therefore, insists on a rigid adherence to a curriculum that is required of all students. It takes into consideration the needs of the "typical" child as it sees them from its mature point of view and holds that these are so basic that they have equal validity for all. If a discrepancy exists between the needs of which the child is aware and those which the conservative system has set up for him, resulting in his unwillingness to do the work that is required, extraneous forms of pressure are available in the form of rewards and punishments designed to bring the child to a definite goal re-

gardless of his cooperation or objections. Thus the system of corporal punishment, staying after school, writing a sentence a hundred times, wearing a dunce cap, and other punitive arrangements are provided; while on the positive side the teacher has at his disposal gold stars, special seats of honor, prizes for doing outstanding work, and excuses from the performance of certain chores. The grading system, of course, was designed to serve simultaneously as a positive and a negative incentive.

Critics of extraneous positive and negative incentives must recognize that the ultraconservative position makes their use inevitable. General needs and interests of groups of children can be stated only in general and indefinite terms, not laid down in specific "subjects" and routines. Unavoidably, the motivation for the performance of tasks which are not self-motivating must be provided by other means. A task which appeals to the individual requires no such arrangement, because he desires to master it for its own sake. In the absence of such an attitude toward the learning situation, a person must be made aware of its worth-whileness by associating it with meaningful incentives, so that his performance is directed toward the attainment of those ulterior goals to which mastery of the material or development of a skill constitutes the means. For instance, in its primitive form, religion has found it expedient to devise a system of eventual rewards and punishments to force its adherents to behave in a way which otherwise would be meaningless to them. The promise of salvation and the threat of damnation cause many a man to respond in a way which would not have occurred to him otherwise—not because he *wants* to respond that way, but because doing so supposedly aids him in the attainment of a desirable objective. As always, the stronger motive prevails in the choice of alternative modes of behavior; when the desire for personal salvation is more intense than the urge to commit a disapproved act, a man restrains himself; in the opposite case, he commits the act and takes a chance on losing his soul.

Psychologically, the traditional school is consistent in its method

of providing ulterior motives for the performance of tasks which it considers essential, but legitimate criticism is possible of its basic assumptions.

A further objection to the traditional curriculum is that it is based primarily upon adult interests and needs rather than upon the interests and needs of the learner, whether he be a primary child or high-school junior. Not only is it based upon adult needs, but much of it is based upon the needs of a superior adult of the distant past rather than upon those of the adult of today, so that there is considerable doubt whether this curriculum even adequately meets the needs of the near-adult in high school and in college.

There is considerable evidence to show that optimal learning does not always proceed from what is apparently the simple to the complex, but often in reverse, and it is becoming clear that what adults term a simple concept often becomes so only after much experience with the "complex." An illustration will make this clear.

Many adults of today can well remember that they were taught to read by the *ABC* method, and educators of the time would have been shocked if anyone had suggested that children first be taught words or sentences. The reasoning behind the older procedure was as simple as it was logical. Words were made up of letters; sentences were made up of words; paragraphs were made up of sentences. Before a child could read words he must know the letters of which words were composed. In this case the letters supposedly were the simple, the words and sentences the complex. How could a child distinguish "dog" from "cat" if he didn't first learn the letters out of which each was made, and then their organization into words? The answer seemed apparent, and few, if any, questioned it: he couldn't. However, we have learned since, as a result of psychological studies, that neither children nor adults learn best in this manner; in fact, such learning must be forced and is contrary to learning principles. Actually the child first sees a word as a pattern rather than as a series of individual letters or-

ganized in a certain way. The difference between *dog* and *cat* is not that one is made up of the three letters *D O G*, organized with the *d* first, followed by the *o* and then the *g*, or that cat is *C A T*, but that the two words don't look alike. The fact that they are of the same size, however, is confusing at first, so that it is easier to tell *elephant* from *cat*, as the difference in form is great.

The same illustration can be carried further. To a six-year-old child the letter *d* is a meaningless scribble, as are *o* and *g*, so that learning them becomes exceedingly difficult. Put them together into a pattern of *dog*, however, and they immediately become meaningful, as what child of this age has not had experience with the animal for which this symbol stands? The word *the*, on the other hand, is almost as lacking in meaning to a child as the letters out of which it is made. If this is doubted, try to explain just what a *the* is. Put this word with *dog* and *runs*, however, and you have something that makes sense. Children soon detect the difference between the sentence patterns *The dog runs* and *My kitty likes milk*. From that point on it becomes a relatively simple matter for the child to learn the individual words, provided, of course, that he has reached the stage of social, mental, and physical maturity essential to learning to read. Ultimately he will be able to attend to the individual letters as such. To an adult with little psychological knowledge, this appears to be going from the complex to the simple—actually it is the opposite. This same illustration could be extended into much of the mathematics, history, language, and other subjects taught by the traditional school.

As to the order in which different subject matters are put before the child, traditionalism fails to consider adequately the constantly changing interests and motives of the child. It assumes that the mastery of certain kinds of materials will constitute sufficient incentive to continued experiences in the same field, which is correct only under special conditions—when the relation between these experiences and the child's needs is significant at each level. Every maturational and developmental stage has its own requirements which should guide the selection of learning activities as well as the

materials to be utilized. Coherence between successive stages need not be *methodological,* as it is in the ultraconservative system; experiential continuity can be secured by *psychological* means as well.

A brief description of two teaching situations in which the ends desired are essentially the same will make the above generalization clear. In the particular city school situation from which this illustration was taken the state law requires that not later than the beginning of the eighth grade the constitutions of the United States and of the state itself shall be studied. If either of the teachers concerned were asked her goal or objective in the compliance with this law, she would answer that she hoped that the children would gain an understanding of our government and its functions. Here, however, the similarity ceases, due primarily to the difference in the educational philosophies and psychological concepts of the teachers concerned. Incidentally, both teachers are considered by the community to be excellent instructors, and both are well liked by the pupils of the junior high schools in which they teach.

Miss Borden teaches in a rather conventionally minded school and sincerely believes that there is no *easy* road to learning—that, when all is said and done, there is a body of logically organized subject matter that the state requires to be taught and learned, and that her job is to see that the children master it sufficiently to comply with the intent of the law and the course of study. At the beginning of the year, consequently, the children begin an intensive six weeks' study of the Federal and state constitutions. Miss Borden has learned by sad experience that most of the children in her class cannot read and understand the Federal document without considerable aid. She begins the study, therefore, first by an explanation of the state law so that the children will see the necessity for the study, and then by teacher and class reading through the Federal constitution together. This takes several periods, as numerous pauses must be made to explain difficult new terms, to emphasize the importance of certain sections, and to bring in his-

torical episodes to help the children understand certain of the provisions.

Then begins a period of careful study, recitation, and group drill upon the provisions themselves. The preamble, the elastic clause, and one or two other parts are committed to memory. Games are introduced to add interest to the study, the favorite ones being the baseball game and one modeled after the old-fashioned spelldown. Generally it is the boys against the girls, with the class composing the questions for the baseball game and the teacher acting as quizmaster and judge in the quiz game. Numerous tests, generally of an objective nature, are administered to check progress, to help stimulate the pupils to greater effort, and to form a fair basis for the monthly report-card marks. At the end of the six weeks' period of the study, the children take comprehensive examinations over the two constitutions. Children who make grades below the passing mark are required to continue their study outside of class and retake the examination two weeks later, as Miss Borden believes that the requirements of good citizenship demand that children master this material. In this connection it must be said that Miss Borden gives unsparingly of her time to help the slow but conscientious pupil make the required grade and has been known to stay after school several nights in a row to drill those who cared to stay, so that even with her high standards she has seldom failed more than three or four students at the end of the year, unless she was unlucky enough to get an unusually large number of laggards.

Miss Hancock teaches social studies in another of the city's junior high schools. Educated in a so-called progressive teachers college, and under the leadership of a principal with "new" ideas, Miss Hancock has developed a teaching situation differing considerably from that of Miss Borden.

Miss Hancock believes that there is no *short cut* to real education, that learning must be a process of experiencing and must continuously grow out of a child's own past experiences. For several years now she has been conducting her class as a two-hour

period in which she has combined the fields ordinarily thought of as English and social studies. Miss Hancock realizes that the Federal and state constitutions are in themselves highly abstract and far removed from the actual experiences of the beginning eighth-grade child. Consequently she has developed a program devised to lead the child into those experiences which are essential to the development of really functional understandings of our governmental institutions—city, state, and national. She has obtained permission to devote as much time as seems necessary to accomplish this, with the result that most of the year is spent in activities related to this problem.

For several weeks no mention is made of state and Federal constitutions as such. The teacher during this period is concerned primarily with helping the children gain increased understandings of the many problems involved in community living. Through field trips, discussions with city officials, research, dramatizations of city-council meetings, and similar types of learning activities, the children are learning by firsthand experience the manner in which their own community is performing the basic functions of social living. Through actual attendance at a city-council meeting they have seen the legislative function of government being performed. They have talked with the mayor, have visited the fire and police departments, and studied statistics obtained from the health authorities. Gradually they have learned what the executive department is and does, and do not hesitate to use this term in their discussions. They have sat through a civil trial and have had direct experience with the performance of the judicial function. To Miss Hancock's children, these departments exist in the city because there are certain functions which must be performed, and this is the type of organization which we have developed for their accomplishment. These terms are becoming concepts developed through long periods of experiencing rather than definitions to be memorized.

Gradually the horizon of the children is expanded so that before long they are discussing and studying not only city problems but

county and state problems as well. The study of city transportation problems invariably leads to the question of who builds and maintains highways to neighboring cities, while the numerous questions concerned with the protection of health and property invariably lead them to the county and state health departments and other governmental institutions for needed informational materials.

The father of one of the children of the class is a representative in the state legislature and he is more than glad to spend a two-hour period with the children telling them about the state legislature and what it does. A "state government" is organized in the room and the children carry out an election to determine the various state officials. Actual state problems are seriously discussed through dramatization and the state constitution comes in for serious study as source material. Historical materials are utilized frequently, as they are needed to help in the understanding of the many problems of state organization, so that several months are required before the children have become primarily concerned with our Federal government. By this time, however, they have developed a considerable degree of understanding of the institutions of government and have made numerous comparisons between city, county, state and federal institutions. Such abstract terms as "checks and balances," "judiciary," and "administrative policies" are terms of common usage and make possible the study of the Federal government and Constitution with considerable understanding.

Miss Hancock believes that history has a real contribution to make, particularly in developing ideals of American democracy, so that she makes every effort to get her children interested in how the United States Government has come to be what it is. In the seventh grade the children have studied considerable early American history and have a fairly good background for the use of historical materials dealing with the formation of early American government. Under Miss Hancock's guidance, history becomes something to be relived rather than assignments for study, recitation, and examination. Numerous books on early American life are

utilized, particularly those which deal with problems of community living, and there is considerable group research, reporting, and dramatization of the ways in which the people of the early periods of the United States solved their problems of community living.

There is no final examination with a required passing score to be made. Rather, the year's work often culminates in some type of portrayal of our American institutions. This year, for instance, the children are developing a pageant called "The Rise of American Democracy" to which they will invite their parents and classmates.

This illustration presents the general philosophy of two schools of educational thought—the conventionalist, or traditionalist, which sees education as the mastering of a given body of logically organized subject matter, and the so-called moderate progressive, which conceives the educational process to be continuous growth —mental, social, physical, and emotional—through varied and direct experiencing within the child's level of ability and closely associated with his own needs.

Active participation of the learner is a condition basic to satisfactory educational progress. Efficient procedure, consequently, requires that the learning situation be related to the pupil's needs as closely as possible in order that there may be optimal cooperation and effort on his part. Admittedly, reluctant and submissive conformity to imposed procedures may be effected through a variety of disciplinary measures and extrinsic motivating techniques, but experimental evidence abounds in support of the contention that learning is far more efficient when the learning situation is purposeful to the child. This does not mean that learning cannot occur under the highly rigid conditions imposed by the traditionalist system. However, such an educational system is not only wasteful of effort, but often fails in achieving the real aims of modern education. Indifferent to the needs of the child at a given level of maturity and unconcerned with his interests, curiosity, and enthusiasm, such a curriculum places before him an array of subjects not in themselves calculated to evoke a

learning response. This system, consequently, proceeds to motivate the potential learner by techniques as ingenious in their variety as they are superfluous in a true learning situation. Of course, within the limits imposed by ability, children will learn under these conditions—but at what cost!

Extreme Progressivism

It should be reemphasized that the difference between the conservative and the so-called progressive in education is a matter of degree, with few teachers appearing at either extreme. The radical progressive and the real traditionalist, however, are so far apart in their psychological and educational beliefs that it is difficult for them to understand or even tolerate each other. The great majority of educators fit into the scale somewhere in between.

In breaking with traditionalism, with its emphasis upon the mastery of logically organized subject matter and preparation for adult life, certain educators swung to the opposite pole, advancing the philosophy that child needs and interests alone should determine the learning activities. The statement that "what the child learns is not important; *how* he learns is of great significance," became the guiding principle for certain experimental schools, with excessive stress placed upon child freedom in the teaching situation. Planning on the part of the teachers was practically banned, as this would restrict the complete freedom of the learner. So far as possible, the teacher should recede into the background, with the children the sole judges of their activities and behavior, the function of the teacher being to guarantee, so far as possible, the undisturbed freedom of his class.

Under this arrangement the pupils decided not only the specific form which a group project was to take, but also the area from which it was to be chosen and the ultimate purpose for which it was to be selected. Also, the group had full charge of determining the relationships of each member to the project, the relative responsibilities for its success, and methods for enforcing its purposes upon negligent members. Goals, methods, and discipline alike

were to be pupil-selected and pupil-enforced, with the ultimate ideal of making the teacher virtually superfluous as the particular group matured.

This extreme view, in contrast to the traditionalist's position, placed an emphasis on immediate needs and interests wholly out of proportion to their transitory significance. Like its antithesis, the radical progressive school ignored the continuous modification of the child's motives due to maturation and experiential growth and thus had no way of dealing with inevitable inconsistencies among successive stages of development. Whereas the traditionalists profess to take into consideration only the ultimate goals, these progressive extremists permitted momentary objectives to determine learning experiences. Either of these viewpoints falls short of a final solution whereby present needs are correlated with ultimate needs.

The radical progressives viewed the educative process as a more or less unrelated sequence of meaningful experiences leading to an indeterminate objective. At each level the experienced needs determined the activities and materials to be utilized, with no continuity provided except such as might be inherent in the succession of changing needs. The direction of adult experience, a paramount feature of traditionalism, was mostly lacking. Furthermore, a metaphysical insight was presupposed on the part of pupils by virtue of which they were capable of selecting experiences consistent with their needs prior to having an experiential acquaintance with these events. In other words, it expected them to make judgments concerning values before they had an opportunity to examine them, thus leaving their progress at the mercy of changing attitudes. As for the role of the teacher, he should not interfere, either by positive direction or negative restraint, for pupils were self-determining organisms free to develop in whatever direction their momentary needs seem to point.

This extreme point of view, which seems to put a premium on activity for activity's sake, implies that the forces which drive a child to activity are innately good and that the child is more

capable than adults in the selection of learning activities and lines of development. It should be clear that present child interest and needs may be wholly inconsistent with future needs and with the requirements of the societal order to which the learner belongs. The immature learner often embarks upon a course of activity which at the moment appears to fulfill his own needs. However, not all of these activities bear a direct relationship to his persistent needs or to the best interests of society. In fact, situations may easily be conceived in which such activity is diametrically opposed to individual and group interests—for instance, a child's desire to find out whether or not a sun-burning glass will set fire to a bedroom curtain, or whether or not "the old car will make eighty"!

The so-called "doctrine of child interest" has often been interpreted to mean that the child should do only those things in which he might be interested at the time. It would probably be less misleading if this conception of learning had been called the doctrine of purpose, or purposeful activity. It should be stressed that the important thing is that the child see a purpose in what he is doing; that he is progressing toward a goal that he accepts as his goal and which for him is obtainable. Interest has too often been misinterpreted as being synonymous with entertainment, when actually it may be far removed from this. A child or adult with a definite purpose in mind—a goal which he is determined to reach—will drive himself through situations which not only lack entertainment, but which might otherwise be almost unbearable. Psychologically and educationally, the question is not whether a task is interesting and entertaining, but whether it is purposeful and educative. This point has often been unrecognized by both extremists in education.

Teaching as a Guidance Process

Guidance by a more mature and more experienced person is indispensable in the educative process in order to relate present individual needs and interests to further ones and to those of the

group. Lacking in experience, the child cannot possibly predict the outcome of a new activity in which he desires to take part. The teacher, however, is in a position to judge its merits because of his previous observations and his information concerning not only the child's needs and abilities, but the needs of society as well. Without doing violence to present interests and desires, he can so guide the specific activities of youth that they will lead to further growth and to more advanced experiencing while being consistent with the present interests of the group and directed toward ultimate social as well as individual benefits. Stated differently, present pupil interests and needs should provide the motive power for the educative process; the aims of education, growing as they must out of combined social and individual needs, provide the lines of growth—the ultimate goals. It is the adult's function in the educative process to so guide the activities of the learner that growth along these lines is inevitable.

Modern educators now recognize that the needs of the organism at its particular stage of maturation, and in its particular condition, release the energy necessary for behavior of any sort; that previous experiences determine specific outlets for this energy in the form of specific satisfactions sought; and that only an experienced and mature organism can provide conditions which are optimal for the building up of habit patterns, interests, and attitudes that are consistent, as far as can be determined in advance, with an inexperienced organism's future needs. Accordingly, progress in an educational sense depends upon the orderly integration of successive experiences directed toward a desirable goal. Since the immature organism obviously is incapable of evaluating the desirability of an ultimate goal prior to achieving it, a more experienced person is to be charged with its selection. Furthermore, such a person has the function of guiding the child's activities to ensure progress toward this destination across the uncharted plains of experiences yet unknown to him. Such planning, however, is to be done only in a general way and is to be worked out in detail from time to time with due consideration of the individ-

ual's past performance and present condition, *and with learner participation to the greatest extent possible.* The individual learner supplies the basic energy without which no progress can be made; he develops, through experiencing and maturing, specific and individual needs manifesting themselves as habit patterns, attitudes, interests, and concepts; finally, he is instrumental in determining the rate and kind of progress which his experiences permit him to make by virtue of his successes and failures.

On the one hand, a group of growing organisms engaged in purposeful learning activities designed to promote their development; on the other, an experienced teacher providing learning situations based on his understanding of present individual and social needs and in harmony with modern psychological concepts —such is the picture of a modern school. It differs radically from that of the ultraconservative type in which the teacher's function is that of acquainting the pupils, by any method within the broad limits of the law, with a well-defined body of "essential" information and the development of rather specific skills; nor does it resemble that of the ultraprogressive type in which the teacher's usefulness is reduced to assuring complete freedom of activity to his pupils. No longer can the teacher consult his calendar for the semester to find out on what page today's lesson begins; nor, on the other hand, does he wonder where the children will take themselves today on an unpredictable journey into unknown territory.

In the stage of transition from ultraconservative schools to the present order it was necessary to introduce *guidance* as an adjunct to teaching. The purpose of educational guidance was to attempt an adjustment of pupils to the exigencies of the curriculum, leaving the latter relatively undisturbed. Now that psychological principles are influencing school procedures to an ever-increasing extent, the guidance function is becoming an integral part of the teacher's job and is no longer considered an appendix to his other duties.

There appears to be no need for continuing the artificial and arbitrary distinction between teaching and guiding, since the cur-

riculum has lost its inviolable rigidity.The guidance worker exercises the functions of the teacher in a particular situation, and the teacher uses guidance techniques in all of his work with children. *Guidance* has been conceived as making provisions for the full development of the individual in the light of his needs and capacities, but precisely the same definition is implied in the preceding discussion of *education;* consequently the reader will look in vain for a chapter on guidance in this volume as there seems to be no point in considering this function separately.

The Requirements for Modern Teaching

It follows that the educational requirements for teaching in the modern school are appreciably different from those prevailing in a past era. Indispensable though a thorough mastery of certain subject matters may be, it no longer can be said to constitute the sole measure of a teacher's qualifications for his job. Providing adequate guidance involves more than an understanding of curriculum materials; it requires, in addition, familiarity with the characteristics of students and the society to which they belong.

Among the qualifications that can reasonably be expected of men and women devoting themselves to a career of guiding youthful experiences are the following:

1. An Understanding of Students.

a. Biological and Social Needs. Because of the influences which biological and social needs exert upon the individual's activity, the teacher must be familiar with biology and psychology to a sufficient extent to enable him to develop a classroom learning situation in harmony with the needs of the learner. He must know how to make optimal provisions, both inside and outside the classroom, for the satisfaction of these basic needs if education is to be highly effective in the modification of pupil behavior along desired lines.

This background is essential if the teacher is to appreciate the complexity of his task. The responses which he is able to obtain

from his group are greatly affected by the organic conditions, social satisfactions, and levels of integration of its members. No intelligent approach to the guidance of pupil experiencing can be made except on the basis of thorough familiarity with the basic conditions which determine the behavior of an individual as such or as a member of a social group.

For instance, a teacher of forty-five who has led a life of secluded and well-protected spinsterhood, who looks upon the social studies chiefly as subjects to be taught and mastered, and considers her responsibility primarily that of seeing this is done by her students, will never become more in the lives of the adolescent boys and girls of her classes than just another teacher to be tolerated. To be capable of exercising a real guiding influence over pupils, a teacher must have lived life himself or herself, must understand the social and biological drives of adolescence and be able to utilize these forces in the development of a classroom curriculum based upon the needs and interests of youth in the modern age.

b. Learning Processes. The processes through which experiences lead to modifications of behavior must be understood. Unless there is a change in motor skill, emotional reaction, pattern of thinking, interest, or in some other sphere of a person's behavior, an experience cannot properly be called educative. Furthermore, this change must be consistent with his developmental process; in other words, it must constitute growth in some direction. In order to discriminate between situations leading to such experiences and those which involve only routine behavior, the teacher must keep clearly in mind the goals toward which pupils are being guided, the processes by which experiential growth takes place, and the present stage of growth, not only of the group, but especially of each individual.

The increasing maturity of the organism, and particularly of its perceptive and responding mechanisms, supplies an important clue to the experiences leading to growth at different stages of development. Situations too simple or too complex for the maturational level of the pupils do not usually provide opportunities

for further growth. To be educative, an experience must utilize past experiences, must involve familiar behavior, but, in addition, must lead on to more advanced or complex behavior.

This point is well demonstrated by the above illustration of the teaching of the Constitution of the United States. One class suddenly was plunged into a study of exceedingly difficult subject matter, with little or no attempt to develop the social concepts of the pupils to a point where understanding of the highly abstract and complex organization of the Consitution, with its advanced vocabulary, was possible to any but a very few students of high ability and wide experience. The other teacher, over a long period of time, led her pupils into those experiences calculated to develop essential social maturity, so that real and functional understanding was a distinct possibility. Not only were activities so planned that simple concepts grew out of a study of the community itself, but the types of learning activities were geared to the maturational level, mental and social, of the learners. The children were not expected to read highly abstract governmental documents until they had first developed essential concepts through actual experiencing.

Often by a process of hit-or-miss experimentation an individual may find a solution to a problem. By association with an established response a new reaction may become incorporated in his repertory of behavior. A satisfactory solution which presents itself unexpectedly may be recognized as such and henceforth be applied under similar conditions. The nature of the material, the characteristics of the learner, and the end or goal sought are decisive factors in determining the most effective approach to the learning situation in each particular case. In preceding chapters a variety of ways in which behavior may become constructively modified has been suggested, and it may be well to refer to them at this time.

c. Emotions and Attitudes. Enough must be known about emotions, attitudes, and interests to enable the teacher to provide situations containing adequate incentive for desirable responses.

Activities motivated by contemporary interests tend to be more productive than activity not so engendered; consequently the teacher should utilize opportunities leading to such experiencing. By so doing, the problem of motivation, so difficult in the older type of education, is largely solved because properly chosen activities are self-motivating. For instance, when the child is striving to find the solution of a difficulty in which he is really interested, gold stars and grades become superfluous. The pleasure derived from solving a vital problem provides ample satisfaction without the aid of extraneous incentives. No one who carefully has observed a child at work on such a problem, whether inside or outside the classroom, doubts but that the amount of time and energy voluntarily spent on the project compares favorably, both as to quantity and effectiveness, with that expended under coercion on a less congenial task. Only gross unfamiliarity with child psychology can lead one to contend that such an arrangement makes things "easy" for the individual and causes him to put forth less honest effort. Very much the opposite is true, and his progress is advanced by the feeling of successful achievement prevailing under these conditions.

The teacher who understands the attitudes and interests of his group will, by judicious use of situations calling forth positive emotions, be in a position to take full advantage of their stimulating effect upon pupil growth. He knows that the older technique of stimulating greater effort by creating a spirit of competition has its obviously undesirable aspects. As a makeshift arrangement, to provide incentives when the materials on which the pupils are working do not motivate them adequately, competition among the members of the class becomes necessary, but when the experiences themselves are sufficiently interesting to arouse students to their best efforts, the need for competition is eliminated. The incentive is not to do the task better than the next person, but to deal with the problem more effectively than in the past. *Personal growth rather than achieving superiority over others* is the new emphasis in education.

2. An Understanding of Society

a. The Complexity of Modern Society. The society in which the individual lives is the composite of all the forces and agencies with which he maintains contact. At various stages of development, in different eras, and in different social, economic, religious, and national groups, these societies may be very dissimilar. The teacher should be familiar not only with the characteristics of present-day society as a whole, but also with the various societal types represented in his classes. He should be aware of the changes occurring in a pupil's social environment with increasing maturity and with more complex experiential background; he should understand the particular problems involved in belonging to different groups, the conflicts and bonds existing among their members, the methods of coordination, integration, and cooperation by virtue of which individuals from various societal levels and types manage to coexist. These and similar aspects of society must be considered by the teacher from the genetic point of view, both as they operate with the children of his group now and as they will operate later. The development of such teacher understandings is complicated by the fact that societal structures are not static, especially in a democracy, so that a child exposed to experiences fitting him for membership in a certain group may find these same experences wholly inadequate if he becomes a member of another group.

This was abundantly demonstrated during the great depression, when economic conditions compelled many people to forsake their own social environments for ones for which their experiences had not prepared them. The result was not merely inability to provide themselves with the means of living, but—more seriously—inability to adjust to the new groups because of their novel demands, problems, and standards. Consequently, a state of considerable disintegration existed. No more dramatic argument against specialized class education could be presented than the evidence available in such records as relief rolls, police blotters,

and the reports of psychiatrists and coroners—records serving as mute indictment of an educational system which provided such narrow and inadequate experiences that satisfactory adjustment in a societal order different from the customary one was not only exceedingly difficult but unlikely.

It is true that no man can predict the shape of things to come with any high degree of certainty, but it is axiomatic that the interrelations of social strata are in a constant state of readjustment. It is a serious mistake to guide young people in their experiences toward arbitrary, static goals. Not only does this leave them unprepared for changes that are to come, but it makes them incapable of intelligent participation in the inevitable modifications which are characteristic of modern society. The aristocratic education of the nineteenth and early twentieth centuries in the relatively static societies prevailing in Russia is an example in point. Traditional values and aims prevailed in the schools as well as in other social institutions frequented by the upper classes; consequently these people, as adults, were incapable of appreciating the urgent need for readjustments in the social order. Never having been guided into experiences enabling them critically to reexamine the existing structure, and therefore convinced of the righteousness of their manner of living, they were taken completely by surprise when less privileged groups pressed their demands with such force that the essential reorganization of the social order signified the end of "their" world. The schools of the privileged classes had failed to provide experiences broad enough to enable their pupils either to become leaders in a gradual process of social betterment or to adjust themselves adequately to rapid changes not of their own making.

Education today experiences considerable difficulty in accomplishing its functions in this respect. This is partially, if not chiefly, because of the lack of understanding displayed by individuals and groups, both lay and teacher, who, having been trained in conventional schools with their lack of adequate social insight, fail to appreciate the need for these broader experiences which are

the only safeguards against revolutionary movement. An educational system dedicated to the maintenance of a social order, and with values which are no longer consistent with a changing world, contributes greatly to an inevitable situation in which drastic revision becomes the only solution. Taking cognizance of alternative values and of the need for reexamining present institutions in the light of changing conditions, however, equips students with the ability to participate in effecting those gradual modifications which obviate the necessity for disorganizing revolution. The real fomenters of the French Revolution, for instance, were not the proletariat, but the reactionaries obstructing the social progress of the nation.

It is the duty of the teacher to aid in the prevention of the occurrence of a similar catastrophe in our country. Chauvinistic indoctrination with static concepts ossifies the pupils' relations to an order which is transitory, and hence causes inevitable disruption when the order changes without their being able to determine the direction of the changes or to keep pace with the new developments.

b. The Relation of the Individual to Society. The adjustment of the individual to his society and its many aspects is determined by his ability to share in its experiences and contribute to its maintenance. This necessitates an understanding on his part of the aims and interests of the social group, together with a sensitivity to its changing needs; an ability to appreciate conflicting claims of different groups and to evaluate the relative merits of each; a desire to cooperate by granting the rights of others, even when they necessitate a restriction of his own freedom; a readiness to share the obligations as well as the rights and privileges of membership in the group; and vocational preparation sufficient to contribute to the group's welfare by rendering the best service of which one is capable and by virtue of which he can maintain himself. In these matters the task of the school is clear, but difficult. It is to provide a curriculum of rich and varied experiences in performing the basic functions of living in a changing society which

will enable the individual to take his rightful place as a well-integrated member of that civilization.

An increased recognition by educators of their responsibility for greatly increased contributions to social as well as personal integration has resulted in the so-called "core curriculum" developments in many cities and states. In general, and in an overly simplified way, the philosophy of the movement is this: If a social order is to be well integrated, a characteristic upon which the very existence of the group depends, there must be a fairly high degree of commonness of thinking and acting in basic human activities. For instance, a social group cannot exist with half the people believing in democratic ideals and ways of living and the other half dedicated to the fascist way of life. Social disintegration and conflict are inevitable whenever large groups within a society differ too widely in basic ideals and principles of social living. It is equally true that the individual himself cannot lead a reasonably happy and effective life if he differs so greatly in his ways of behavior from those of the group as a whole that he cannot adjust himself to the institutions of the society in which he lives. Individual disintegration results from such failure to "belong." A growing recognition of the school's responsibilities for contributing to necessary social and personal integration is resulting in a greatly changed curriculum. The "core curriculum" being developed is composed of those experiences under the guidance of the school which are deemed essential to the satisfaction of individual and social needs in a dynamic social order. "Core activities" are required of all pupils and consume most of the time through the elementary and junior-high-school years, with elective activities increasing in the senior high school to provide for individual needs not common to all.

Much has been made of citizenship training in recent years, but it should be clear that such experiences cannot be expected to lead to desirable results if they are limited to isolated learnings. The oath of allegiance and the salute to the flag are meaningless unless they are combined with socially desired behavior patterns.

Reciting the Gettysburg Address becomes a farce when done by a pupil whose attitudes are biased and undemocratic—meaningless unless the learning of it has resulted in modified thought and action.

Effective citizenship education is not preparation for future membership in an adult society; it is exercise and practice in the duties, obligations, and privileges of citizenship in the society to which the child belongs at the various levels of his development. Such education is not conceivable in a school situation where prescribed and formal courses of study and methods of presenting selected materials are dictated by authority, no matter how wisely the choices have been made. Even benevolent dictatorship still is dictatorship. Experience in democratic citizenship is possible only in a school in which provisions are made for pupil participation in decisions affecting the welfare of the group and in which the unique contributions of each individual are respected and utilized. If children are given such opportunities at successive stages of development they will be ready to assume their rightful places in adult society when the time comes.

More and more it is being recognized that pupil experiences should be guided so that cooperation and coordination with the activities of others will result, but the peculiar abilities distinguishing individual members from each other must receive due recognition. For instance, this includes the guiding of each child toward vocational objectives for which he appears to be particularly suited, together with respect for the contributions of those whose capabilities vary from his own by virtue of differences in temperament, intelligence, or skill.

The teacher must be able to detect the special capabilities of each child and to devise learning situations whereby these qualities may be fully developed. Such individual differences constitute the very basis of democratic society and must not be neglected. This problem of provision for individual differences, one of the most important in modern education, will be discussed in greater detail in later chapters.

SELF-EVALUATION EXERCISE

Directions: The following items relate to the guidance of pupil experiences. Some of the statements and described situations are in harmony with modern psychological thought; others are not. On a separate sheet of paper write the word "agree" if you believe the statement or the described situation to be in harmony with modern psychological thinking, or "disagree" if you believe otherwise, together with reasons for your agreement or disagreement.

1. The function of education often has been considered to be that of preparing children for adult living. No curriculum primarily based upon this conception of the purpose of education can result in highly effective learning situations.
2. The conventional curriculum, based as it is chiefly upon the subject-matter mastery concept of education, leads inevitably to some form of extrinsic motivation.
3. In school S arithmetic is taught in something like the following manner. The children of the first grade begin by memorizing the numbers up to 50, combined with drill on the addition "combinations." This is followed by drill on simple subtraction and the multiplication tables as they progress through the primary grades. Near the close of the third grade they will have developed adequate competence in these processes, so that arithmetic reasoning problems now begin to assume a more important place in their arithmetic study.
4. Mrs. Jordan has her class begin each new topic in biology with a classification study of the particular family of plant or animal life under consideration, as she believes that this is the scientific as well as the scholarly approach to the study of biology. Actually, while this is a logical approach, from the point of view of pupil learning it is starting with the complex and psychologically is not good practice.
5. A classroom curriculum based upon child interests means that

the day-to-day interests of the child will be followed, and that these will determine the kind of activities for the particular day at hand.

6. The children of Miss Gibson's fifth grade are just completing a unit of work with "Living in Colonial America" as the theme or center of interest. Miss Gibson believes that the class should take one of the major world peoples as the theme for the next unit, but has no set notion as to which it must be. Consequently, through use of some motion pictures and outside speakers she begins a development of interests in other peoples, which, after a couple of weeks, grows into a unit on "Living in China," although several of the class would have preferred the selection of a European or South American civilization to the one desired by the majority of the class.
7. In illustration number 6 it would have been much better if the teacher had selected the topic for study, as she not only would have saved a great deal of time and "fumbling around" by the class, but there would have been no disagreement within the class on the topic for study.
8. No teacher can do an intelligent job of guiding pupil activities in the classroom unless he has a clear concept of the aims of education—an understanding of the behavior patterns essential to the welfare of the individual and of the society in which the individual lives.
9. Children require careful guidance by an intelligent adult chiefly because the child is incapable of planning his own activities or of setting his goals.
10. If the teacher of today is careful to use selected textbooks, and if he follows the courses of study faithfully, he cannot go far astray in accomplishing those pupil growths normally thought of as "educational aims."
11. Near the end of each six weeks' period Miss Jones takes three days of time in her algebra class to review the work of the period and to drill on the types of problems that are difficult for some of her pupils. From a psychological point of view,

this would be considered a truly educational experience for all, or practically all, pupils of the class.

12. Mr. Jenson is a very scholarly young man, and has been brought up strictly by his parents, who have protected him carefully from the "evil" influences of the community. Upon completion of high school he is sent to a selected men's college in a small town where he will be under proper supervision in the dormitory there. Mr. Jenson, both by reason of native intelligence and because of his very careful upbringing, should make a rather ideal teacher to guide high-school youth.
13. The need for social integration requires a degree of commonness of thinking and acting on the part of the members of any given social order; hence, educators must be very much aware of social as well as individual needs in curricular planning.
14. School *A* is so administered that most of the disciplinary problems as well as the student-body activities are subject to a great deal of student planning and control. This is not to be recommended as adequate discipline cannot be developed in this manner.
15. The function of guidance in the public schools of today is conceived to be that of more adequately securing pupil adjustment to the requirements of the school curriculum.

SUGGESTED READINGS

Blackhurst, J. Herbert: *Principles of Methods,* University Press, Des Moines, Iowa, 1936. Chap. I.

Brewer, John M.: *Education as Guidance,* The Macmillan Company, New York, 1932. Chaps. I–XVII.

Burton, William H.: *The Guidance of Learning Activities,* D. Appleton-Century Company, Inc., New York, 1944. Part I.

Dewey, John: *Experience and Education,* The Macmillan Company, New York, 1938.

Dunsmoor, Clarence C., and Leonard M. Miller: *Guidance*

Methods for Teachers, International Textbook Company, Scranton, Pa., 1942. Chaps. I, II, XIV.

Miller, Emanuel, ed.: *The Growing Child and Its Problems,* Kegan Paul, Trench, Trubner & Co., London, 1937.

Mossman, Lois C.: *The Activity Concept,* The Macmillan Company, New York, 1938. Chap. VII.

National Society for the Study of Education: *Forty-third Yearbook,* Part I, "Adolescence," Public School Publishing Company, Bloomington, Ill., 1944. Chap. XVI.

Stratemeyer, Florence B., Hamden L. Forkner, and Margaret G. McKim: *Developing a Curriculum for Modern Living,* Teachers College, Columbia University, New York, 1947. Chaps. VI, IX.

Waring, Ethel Bushnell, and Marguerite Wilker Johnson: *Helping Children Learn,* Cornell University Press, Ithaca, N.Y., 1941.

CHAPTER VII

Providing for General Needs

PROBLEMS

1. Does an activity from which a child derives "functional pleasure" have any further usefulness? Explain.

2. What are the distinguishing characteristics of play and work?

3. What are the values and dangers of competition in work and play? Under what conditions is competition desirable? When is it undesirable?

4. To what extent is successful work in school dependent upon adequate provision for biological needs?

5. In what ways is the modern school revising its curriculum to provide more adequately for the general needs of the individual? What are the chief criticisms of the conventional school in its means of providing for the general needs of all pupils?

6. In what ways can a teacher ensure that the needs of all pupils for social prestige, security, and personal integration will be provided for adequately?

DISCUSSION

Organic and Social Needs

It is essential to effective learning that educational experiences be based upon the individual's needs. Many of these needs are general and, at each developmental level, characteristic of the group to which the child belongs. Others are special needs, growing out of peculiar circumstances which apply distinctively to a particular individual. Both, of course, must be taken into consideration, but in the present discussion general needs will be emphasized.

It has been shown in previous chapters that certain tissue needs, involving organic well-being, are predominant in their effect upon the activity of an organism. Out of these tissue needs, with increasing maturity, develop social and integrative needs which direct the energy liberated by organic conditions. These various needs must now be examined more closely.

The maturing organism requires exercise as well as nourishment. Cell building cannot proceed without adequate diet and rest; neither can the structure attain complete functional development without suitable activity. Whereas the *structural growth* of a muscle depends primarily upon the inherent capacity of living tissue to develop within certain well-defined limits, its *effectiveness of response* is acquired gradually through appropriate experiences. The seemingly ceaseless activity of the young infant is more significant than a mere outlet for excessive energy; for instance, through the constant repetition of kicking leg movements and waving arm motions these limbs gain useful experience which forms the basis of later, more complex activities.

The infant who seems to delight in repeating over and over again the same vocal sound is laying the foundation for his future use of spoken language, while at the same time deriving satisfaction from his accomplishment. This experience has been aptly called "functional pleasure" because such pleasure results from the act of do-

ing something of which the organism is capable. The activity carries with it the feeling of mastery and effective use; no ulterior motive, no extraneous reward, no parental praise enter into the picture. It is doing for the sake of doing, and is play in its purest form. But it is easy to overlook the utilitarian aspect of such play activities, innocent though the participant may be of any conscious thought of ultimate gain. Through this apparently self-sufficient behavior the maturing organism learns to control and direct its muscular system and finds out the extent and the limitations of its functional capacity. This learning takes place, it should be noted, by experimentation within the range of available opportunities, by repetition and variation, by experiencing both success and failure. Thus it is that the infant learns to recognize his capacities and the limitations which are imposed upon him by his structural equipment at its particular level of development.

Once adequate control of a muscle group has been attained and the resulting behavior form incorporated in the child's habit system, the foundation has been laid for a new reaction to which it is a basic prerequisite. When the opportunity for the exercise of a more complex function presents itself, a new process of experimentation is initiated for which the point of departure is the newly acquired activity. Thus, through progressive maturing and increasingly complex experiencing, the motor responses of the child are pyramided upon the base of his simplest and earliest reactions, while the apex represents the most advanced form of activity of which he is now capable by virtue of his maturational level.

By the time the infant becomes aware of his social needs, he discovers that functional pleasure is not the only satisfaction to be derived from activity, and an entirely new field is opened up in which considerations not inherent in the performance of his functions gain significance. Yet throughout the remainder of his life he will continue to take special delight in carrying out certain forms of behavior which are *in themselves* satisfying and not inspired by considerations of prestige or self-perpetuation. These will represent his playful moments of surrender to organic functions with no

thought of consequences and with full enjoyment of the "feel" of the activity; a lazy, deliberate stretch; a hearty, unrestrained yawn; or prolonged scratching of a skin spot that does not itch.

The need for activity for its own sake, for the joy derived from alternating muscular contractions and relaxations, for the pleasurable sensation of a well-functioning organism, persists in the lifelong desire for *play*. There is a tendency to confuse competitive sports with functional play, but it is easily seen that the needs served by these two types of activity may be wholly different. In competitive activities, the social need of recognition is emphasized, while in play stress is laid upon organic functioning, with disregard of the consequences. Of course, in organized sports of various kinds the two elements are combined in such a way that the participant derives functional pleasure from the activity as well as social recognition from successful competition with his rivals. However, the essential characteristic of play has been adulterated by becoming tied up with other motives. A boy who derives organic pleasure from propelling himself through the water may add to his satisfaction by improving his technique so that he becomes a skilled swimmer. When he is matched against others, and thus attempts to better *their* records rather than perfect his own accomplishment, a new element has been introduced which adds nothing to his functional pleasure. He has ceased playing and has commenced to compete.

This is not to say that pleasure derived from competitive activities is in any sense inferior to that obtainable from play, but it is an entirely different kind of satisfaction, representing a need which is not encountered in play. It is possible to conceive of a civilization based upon individual perfection with almost complete disregard for the comparable achievements of others. The old Chinese and other Oriental civilizations were constructed on that pattern. Our Western civilization has emphasized competition and comparative achievement, with the result that the need for *recognition* has become prepotent as a motivating force. It is a matter of common observation that a prize fighter tends to improve his technique and

maintain his prowess as long as there are worthy opponents and challengers. When all contestants for his crown have been successively eliminated, "the Champ" tends to cease striving for further perfection for lack of adequate incentive, and may be caught off guard if he is not unusually careful. Similar observations have been made of athletic teams which have worked their way to championships against powerful competition but, after obtaining the pennant ceased to improve and even failed to hold their own, so that they were upset by inferior teams more strongly motivated than they.

The amount of satisfaction derived from success and subsequent recognition varies with the type of activity in which success is attained, the competition or obstacles which are overcome, and the source from which recognition is derived. Each individual tends to take for granted his success in whatever achievements are characteristic for his developmental level. Inability to do so is experienced as failure, except when satisfactory defense mechanisms are utilized. On the other hand, mere accomplishment of typical performance is not necessarily a cause for rejoicing. Achieving a level of performance which exceeds that of one's recognized peers with whom he is competing provides the individual with a satisfaction of his need for social recognition. This satisfaction is more nearly complete because he has (1) achieved a degree of mastery of a skill which is not generally attained; (2) he has done this in competition with his equals, not with those whose inferiority he recognizes and whose failure to match him he takes for granted; and (3) this accomplishment is acknowledged by the group which has lost out in the contest and whose acclaim he values just because they are his peers. The boy who is elected captain of the school team has attained his social objective, though he may be near failing in his classwork, while his classmate may attain the same objective by being elected to the senior honorary scholastic fraternity, even though he never has had a chance to make a school team. In either case, the satisfaction depends upon successes in an activity which the boy considers worth while,

which has been achieved by successful competition against those who had equal opportunities as far as that particular type of endeavor was concerned, and resulted in the admission of his superiority by his fellow contestants for the honor.

Whether or not this need for recognition has been satisfied depends, therefore, on the subjective evaluation of the person concerned more than on the objective accomplishment. To a student who groups himself with the average of his classmates, the recognition derived from election to Phi Beta Kappa is real and significant; but the possession of this little gold key may not adequately fill the needs of those who already consider themselves superior students, since all whom they class as their peers obtain it.

Although the need for success and recognition is general, the point of departure varies greatly from one person to the next. General needs cannot be satisfied by setting up common goals, because in their operation these needs lead to a variety of ends. What constitutes satisfying achievement for one is merely a milestone on the road to further success for the other.

The situation as it exists in most schools today is rather the reverse of that prevailing in a handicap race where the slowest horse starts nearest the goal or carries a lighter load. Actually the person who is superior to the rest of the field starts well ahead of them, and takes it for granted that he will pass the judges' stand first. The less privileged individual, on the other hand, if forced to race against those who are obviously and admittedly his betters, will expect to stay behind from start to finish. His greatest need is to be compared with those in his class who are slower than the "privileged" group and whose goals are more modest, or with a group which does not fall in the same classification at all, but strives for entirely different objectives.

It would appear from the foregoing paragraphs that the variation among individual needs is so great that no specific statement of principles for satisfying these needs in the school situation is possible. This is correct in that no precise rules can be worked out, the strict adherence to which will ensure that all common needs

will be satisfied. However, it is quite possible to set down general principles upon which classroom procedures must be based, with allowance for considerable latitude of choice by the teacher in adjusting both materials and procedures to fit the characteristics of his particular group and, ultimately, of its component members.

Meeting Organic Needs

1. The School Environment

The schoolroom should be arranged in such a manner that the pupils are provided with adequate air, light, heat, and freedom from disturbance. School administrators are generally held responsible for making provisions for these necessities within the limits of their budgets, but it should be noted that unsatisfactory physical arrangements are due more often to ignorance of requirements and lack of familiarity with the results of technical research than to lack of funds. A schoolroom can be newly equipped with proper furniture, window space, and heating facilities at a cost which is not significantly higher than that involved in the purchase of unsatisfactory equipment. The influence of proper surroundings on behavior is so far-reaching that the planning of a room and its arrangements is rightly considered among the most important problems of educational administration.

Within the range of available facilities, a skillful teacher can do much to improve the condition of an improperly planned and equipped classroom. Even in the best planned room, the teacher's use of the equipment determines its effectiveness. The proper use of ventilating mechanisms presupposes an understanding of the need for ventilation and the adequacy of the condition of the room in this respect. The most scientific equipment is of little avail if it remains unused or is used injudiciously, and the poorest equipment can be rendered more nearly adequate by skillful usage.

Teachers and administrators may be expected to familiarize themselves with the needs of their pupils in these respects and to

provide surroundings which conform as nearly as possible to their requirements. Adequate planning will go far toward making the school environment conducive to optimal learning situations.

A number of farsighted schoolmen and boards of education have recognized that the modern curriculum requires modified school buildings. The standard-sized classroom, built to hold exactly thirty or thirty-five pupils carefully seated in straight rows of desks or tablet armchairs and conceived primarily as a place to recite previously studied lessons, is now being replaced by the laboratory type of classroom, regardless of whether the class is a fifth-grade group under one teacher for the day or a high-school social studies or science class. The modern social studies or English classroom is a laboratory in which the pupils come to work under the guidance of a skillful and broadly educated teacher, not a place for recitation. As such, it is larger, has movable equipment, preferably tables and chairs, a well-equipped classroom library where most of the reading and visual materials needed for the particular unit or activity are kept, and an adjoining conference room where small groups can work on group undertakings without unduly disturbing the remainder of the class. The blackboard has been replaced by large expanses of bulletin board, some rooms having almost the entire wall constructed of corklike materials. Convenient connections for radio and picture projector are considered necessities.

In regions where the weather permits, elementary schools have been built with sliding or folding glass doors, reaching from floor to ceiling and opening into an outdoor classroom. Here the children maintain their own lawn and garden, plan their own landscaping, and keep various and sundry animals and plants common to the modern elementary classroom. Such schools are so constructed that these outside plots are integral parts of the rooms themselves and are under the direct supervision of the teacher at all times, as there is no immovable wall that separates the outside from the inside.

Naturally, each locality has characteristics which require individual solution of the architectural and mechanical problems involved, but in each case an understanding of the needs of the group which the building is to serve is essential to proper planning.

2. Posture

Since the growing child has a fundamental and urgent need for the proper development of his skeletal structure and muscles, modern educators systematically provide activities calculated to provide experiences to accomplish this objective. Desk work, which not long ago constituted most of the school experiences, has become minimized, and more active behavior is receiving increased emphasis. Even so, work which must be performed at a desk should be accomplished under the best possible conditions. Much has been done to improve school furniture in the light of the child's needs and the findings of posture experts. These new developments consist principally of making seating equipment adjustable to the dimensions of the individual user rather than of standard size, or of providing tables and individual chairs of proper sizes.

When a seat which is too high or a desk which is too low forces the child to stoop over his work even for a couple of hours a day, this habit is likely to become permanent in out-of-school situations as well. Here again the principle applies: establish desirable habits from the start.

3. Exercise

Older schools made a grudging concession to the need of activity by providing a gymnasium period once or twice a week and a brief play period each day. Such activity, however, was considered distinctly extracurricular. At present, gymnastic exercises and play are integral parts of the experiences provided by both the elementary and secondary school. While they generally occur in organized form at regular periods at the secondary level, they are distributed widely throughout the day at the elementary level.

Few are the projects in which children engage which do not involve some amount of exercise, and the skillful teacher plans class projects with such activity in mind. The unity of organic experience thus manifests itself in the modern curriculum and supersedes the older notion of "training the mind" in the classroom and "developing the body" on the playground.

4. Food

It was pointed out above that the need for adequate nutrition is particularly great in the growing child. Adequacy implies not merely quantity but also balance and selection. Even though the school must depend largely upon the cooperation of parents in providing a proper diet, the school cafeteria plays an increasingly significant part in establishing desirable eating habits. Many children carry home the information gained in group discussions on nutritional topics and thus influence the food habits of their families. Through PTA meetings, special conferences, bulletins, and home visits, teachers may bring about more satisfactory conditions affecting the children as well as their relatives.

Much can be done by making available sound information, but the school cannot be expected to eliminate economic causes of inadequate diet. Community organizations are providing free lunches in many districts, and in others the school board includes this item in its regular budget. Recently the Federal government has begun subsidizing school lunches. Undoubtedly one well-chosen and well-prepared meal a day has its effect upon the child's condition, but it should not be assumed that this takes the place of a satisfactory diet in the home. The final and satisfactory solution of the problem of proper nutrition for all children lies beyond the sphere of accomplishment by the school; but the school can make a significant contribution to the arousing of public interest and concern by pointing out the importance of food for effective organic functioning and by publicizing the detrimental effects of unsatisfactory diets upon the progress of children in and out of the school.

5. Rest

As a corollary to proper exercise, adequate rest is a dominant need of the growing organism. The modern school attempts to meet this in part by providing periods of relaxation and in part by varying activities. It should be remembered that fatigue products accumulate primarily in the areas affected by prolonged exercise of certain sets of muscles, and only secondarily throughout the organism. By successively engaging different muscle groups in activity, the amount of fatigue in each is minimized because each has the opportunity of relaxing while other sets are tense. Where the child is forced to sit at a desk for several hours at a time, as was usual in the older school, postural fatigue of the muscles involved in maintaining this position is excessive; but when these muscles can relax while others are active, the total amount of accumulated fatigue in the course of the school day is obviously reduced.

6. Health

The organic unity of behavior implies that effective activity can occur only in a properly functioning body. Consequently modern schools are placing increasing emphasis on provisions for the health of students. Periodic examinations by school physicians and specialists, regular checkups by school nurses, daily inspection and routine of hand washing and teeth brushing, have been incorporated into the school program. Here again the emphasis is twofold: through instruction, discussion, and practice the reasons for these provisions are made clear to the child, and regular health habits are established with the reasonable expectation that they will be continued after the child completes school. Through contacts with parents the teacher endeavors to secure their cooperation in supervising health routines in the home. Teachers today realize that improper provisions are due primarily to ignorance and that correct habits, established as easily as incorrect ones, are just as likely to be continued and made part of the daily routine.

Meeting Social Needs

1. Security

It is, as we have seen above, of the utmost importance that the child be assured of membership in the group with which he identifies himself. This places on the teacher the responsibility for seeing to it that each child in the room considers himself, and is considered by others, to be one of its regular members, having the same rights and the same obligations as all others. In this respect the modern teacher is in a more favorable position than his colleague of the traditional school, because of its pupil-centered rather than subject-matter philosophy, and normally is much more concerned with the development of the fellowship and belongingness which is so essential to the child of school age. Within the larger group of the conventional school, smaller unsupervised cliques are formed, in one of which most children attain membership; but there are always some who are left out altogether and others who do not "make" the group to which they aspire to belong. All this leads to a great deal of conflict and unhappiness, which, in the modern school, is largely avoided.

When the group as a whole engages in a project selected by mutual agreement under the guidance of the teacher, an entirely different system prevails. The skilled teacher sees to it that each pupil in the room participates both in the discussion preceding the selection of a unit and in the activities of the unit, so that there is a decided feeling on the part of each member of the class that he has been consulted and has had a part in the proceedings. This is very different from the traditional procedure in which the "brighter" or more aggressive members of the class take the lead in reciting lessons and answering questions, so that the academically less capable have little or no feeling of belonging to the "in-class" group. They are merely bystanders who watch the teacher and the "inner circle" go through their routine, and much of it remains a mystery to them forever. Consequently, there is a lack of basic

security in the experience of many pupils which is not conducive to their participation in a process of which they understand little, and which does not seem to concern them directly.

In the modern school attempts are made to develop a learning situation which will contribute to the security of each and every pupil of the group through the development of types of learning activities and materials which will make willing and successful participation of each member an accomplished fact.

2. *Recognition*

It has been pointed out that a dominant social need, from the individual's point of view, is the establishment of prestige in his social group; that the area in which recognition is attained and the source from which it is forthcoming is immaterial, for so great is this need that the individual will go to almost any extreme in his attempts to satisfy it. It is, consequently, of utmost importance that criteria be established whereby the child may judge the relative desirability of different kinds and sources of satisfaction of this motive, and that opportunities be provided for gaining recognition in ways conducive to his own best interests and to those of society. Such discrimination can be developed only by experiences in which desirable choices are made worth while, so that the individual builds up habit systems leading to consistently desirable behavior whenever the opportunity for choice presents itself. Definitely, learning rules for "right" behavior will not result in superior judgment in making decisions between alternatives unless, in addition, satisfactory practice has been provided in actually making such choices. There is, for instance, no observable difference in honesty between children from the same schoolroom who do and who do not attend Sunday school regularly. The precepts taught there too often represent experiences not connected with situations containing opportunities for actual choice between desirable and undesirable behavior forms; it is thoroughly consistent that verbalized morality may be accompanied by skillful and habitual deception. Only when the dif-

ference between alternative modes of behavior is experienced in a meaningful situation is the child given an adequate background for developing standards of judgment and behavior to guide his future decisions.

Once recognition has been received for work done which promotes the common progress of the group as well as the child's own growth, this experience tends to lead to further accomplishments of a similar nature. In the absence of recognition, the individual's need will force him to seek approval elsewhere, possibly by engaging in antisocial behavior in which he may achieve mastery and the acclaim of other people. But such an outlet becomes unnecessary when the need for recognition is satisfied through successful participation in school projects. Statistical evidence indicates that juvenile delinquents are drawn largely from groups failing to achieve recognition in school, in the home, or both. Individuals in these groups, incapable of satisfying their need for approval because of low intellectual capacity or inadequate opportunity to express themselves, tend to find this opportunity in some other kind of activity. Hence either the low-grade deviate or the very superior child for whose progress no adequate provisions have been made, may turn to truancy or to studied trouble-making as a means of seeking the satisfactions he needs, and which he should find in school situations.

When the tasks set for the group are unrelated to its interests and needs, and when equal standards are required for all of its members regardless of individual skills, abilities, and limitations, recognition will be obtained only by the children whose experiences and characteristic capacities conform to the expectations of the makers of the curriculum. This inequality of opportunity necessarily leads to many dissatisfactions and to a squandering of the possible contributions of those individuals who are incapable of meeting the arbitrarily imposed standards, and who consequently become discouraged and often uncooperative.

Equality of opportunity means providing differential standards of achievement for those of unequal capacity and skill, together

with provisions for the integration into the common task of the best performances of which each member is capable.

3. *Integration*

As discussed at some length in Chap. III, individuals who are capable of making satisfactory adjustments to life situations, who face problems with confidence and enthusiasm, and who can profit by past experiences in adjusting to new or modified situations, are said to be well integrated in their behavior. Conversely, individuals who face new problems with fear and uncertainty, who are unable satisfactorily to adjust to new situations, and who continuously are torn between conflicting forces, are to a greater or lesser degree disintegrated in their behavior. Integration, then, is a matter of degree and varies from time to time during the life cycle of a person.

It is obvious that certain types of learning situations are integrative in their effect upon the development of behavior patterns, that others are relatively ineffective, and still others definitely disintegrative. Most learning that does not go beyond the verbalization stage—and this includes entirely too much of the conventional curriculum—possesses little integrative value. It is only as students begin *doing* something with and about their learnings, as they become effective outside as well as inside the classroom, that these experiences contribute to the development of a higher degree of integration of the individual concerned. Unfortunately, not all school practices can be labeled merely as lacking in positive results. Situations in which the child cannot possibly achieve success, whether because of lack of adequate ability or other reasons, eventually are disintegrative in character if prolonged, and especially so if accompanied by low grades, teacher and parent reprimands, and "nagging."

An integrative classroom curriculum is an experience program in which each individual is participating in purposeful learning activities as a contributing member of the group. The contributions of each member to the activities of the group must be deter-

mined by his own capabilities. Each learning activity undertaken by the class as a whole can be organized to provide for a variety of experiences, in some of which each member can participate successfully. Rather than developing a situation in which the execution is accomplished by a particular few, it must be so planned that each person's performance materially affects the success of the whole project. Pupils must learn that collaboration toward a common goal means coordination of activities in such a way that some individual tasks must be subordinated to others; that while all contributions are significant to the final outcome, some must take precedence over others as being more basic or important. Conversely, the more capable children in the group must learn to relinquish some of their dominance and delegate to others tasks which they can perform. By sharing experiences in this manner, each individual learns to understand his own capabilities in relation to others and to appreciate the importance of the contributions of all to the common enterprise.

Because the experiences of a group are manifold, there is little danger that this system will lead to the development of a "class system." It is hardly conceivable that the relative significance of the contributions of any two children will be of the same order in any two different projects. Whereas one will have the more important job in one situation, he will have to concede that position to someone else in another. Experience is gained in taking the lead and in giving way to others—but, in either case, with full recognition of one's unique contribution to the task at hand.

This point is well illustrated by an incident which occurred during the development of a unit on "Insect Life in the Community" in a sixth-grade class. For the purpose of their study, the children were divided into groups so that one group of children was making an intensive study of butterflies, another of ants, while still another group was primarily interested in the topic of "Beneficial and Harmful Insects."

The group to which any particular child belonged was determined chiefly by his own interests, yet the teacher, by rather

judicious maneuvering, had seen to it that each group was composed of both rapid learning and slower learning children.

The unit had been under way some two weeks and the group chairmen were holding a conference with the teacher. Each of the chairmen was encouraged to present problems for group consideration. George, chairman of the group interested in butterflies, said, "I don't know what to do with Elizabeth. She just can't seem to understand anything she reads." There was some little discussion, with the other chairmen contributing the information that they were confronted with the same type of problem. Mary offered this solution: "Henry," she said, "doesn't read very well either, and we have to help him a lot. He can make swell pictures, though, and he and Jack are going to make some colored posters showing the different kinds of insects that are harmful and those that are beneficial. Jack's going to do the writing part and Henry's going to draw the pictures. When they get them finished, we are going to put them on the bulletin board at the back of the room."

There is quite a difference between such experiences and those of the conventional schoolroom in which certain students habitually assume leadership and others are passively resigned to taking a back seat. It must not be assumed that only the less capable children suffer from the latter arrangement; the more capable ones often develop a wholly erroneous concept of the importance of their own work and of the insignificance of that of the others. Whether his contribution is great or small, the individual must be made to feel that the project cannot be completed if he fails in his assigned task, and that exceptional performance on his part will improve the quality of the group achievement.

With adults who are accustomed to extrinsic forms of motivation, a similar cooperative spirit can be brought about by suitable means. According to a recent report, when a building is completed on the campus of a leading university, a convocation is called at which all who contributed to its erection are honored, from the donor to the carpenter's assistant. Medals are awarded

to the workers in each trade who, according to a jury of their peers, have performed their tasks exceptionally well. Thus the stonemasons, bricklayers, decorators, electricians, painters, and all others whose contributions are necessary if inconspicuous parts of the completed structure, are made to appreciate the relative importance of their work and receive recognition for their share in its successful completion.

4. Individuality

Each person can make his best contribution to the group to which he belongs by developing to the fullest his unique characteristics. To be a fully accredited member he must, of course, develop a sense of communality; of equal importance is the development of his individuality, which enables him to make himself specifically useful. Individuals differ widely in abilities and skills, and it is the function of education to bring these differences to full fruition so that society may be benefited by the resulting special achievements.

It is a commonly accepted psychological fact that individuals not only differ greatly from each other, but that each individual differs greatly in his ability in the several areas of learning. Joe may be much more capable in the field of music or mechanics than is Bill, but Bill may be much better than Joe on the athletic field or in the more academic areas of learning, such as mathematics or foreign languages. Such differences are generally known as *individual differences.* Joe, however, differs greatly in his own traits. For instance, he learns rapidly in the field of music and plays in both band and orchestra, but last year he nearly flunked geometry in spite of hard work and a determination to make a good grade. Differences within the individual are known as *trait differences.*

The school of yesterday, with its logically organized body of subject matter required of all, its highly academic curriculum, and its lock-step methods, made little provision for either individual or trait differences. The modern school, with its rich and varied

"experience" type of curriculum, is definitely recognizing these differences, both between individuals and within each individual, and making progress in providing for them. The introduction of electives in the curriculum was a recognition of the need for providing for varying needs and abilities. Curriculums based upon individualized instruction and progress have been developed in numerous school systems, while teachers are finding ways and means of greatly differentiating the activities of individuals within a group, even while all are engaged in the development of the same unit of work.

This development of a curriculum which recognizes and provides for individual and trait differences, while still providing those "core" experiences so necessary to the performance of essential social functions and the development of social integration, will be discussed in detail in the following chapters. The essential point here is that these differences are natural and expected human characteristics; that the wholesome development of the individual requires that a school curriculum be developed in harmony with, rather than contrary to, these characteristics; and, further, that even the better school systems of today still have a long and hard road to travel before this long-recognized psychological fact becomes an accepted reality in curricular practice.

SELF-EVALUATION EXERCISE

Section I

Directions: The items below relate to the discussion of providing for general needs. Each item consists of a statement of a problem or a psychological fact requiring completion by the selection of one of the three possible phrases, clauses, or sentences listed as *a, b,* or *c.* Read each item carefully, then do the following:

1. Select the phrase, clause, or sentence which best completes the statement or which provides the best answer to the problem of the item concerned.

2. Write down the symbol of the "best answer" (*a*, *b*, or *c*) on a sheet of paper, together with your reasons for selection, for each item of the exercise. Tell why you believe the answer you selected to be better than the two you rejected.

The fact that one of the three possible answers to an item is considered to be the best answer does not mean that the other two necessarily are wrong or false. Such may be the case; however, it may be that the "best answer" merely is more nearly complete than either of the other two, or that it is more in harmony with modern psychological thought. Remember, don't search for "right" and "wrong" answers or completions to an item, but, rather, for the *best* one of the three possible choices.

1. General needs are—
   a. needs common to all persons.
   b. those needs which grow out of environmental situations.
   c. needs based on inherent potentialities.
2. The more acceptable concept of the function of social needs is that—
   a. social needs determine and direct an individual's tissue needs.
   b. social needs are the needs of the society in general and act as guides to the development of social institutions and mores.
   c. social needs develop out of tissue needs and serve to guide expenditure of energy.
3. In general, psychologists are in agreement that—
   a. structural growth of muscles is predetermined, but effectiveness of muscular response is modified by experience.
   b. structurally the muscular system may be modified considerably by experience.
   c. neither the structure nor the function of the muscular system can be modified greatly by experience.
4. In its pure form—
   a. play is dependent upon the element of competition for its motivation.

b. play is for the functional pleasure derived from the exercise itself and requires no extrinsic motivation.

c. play is a socially integrative force and is engaged in primarily to gain social recognition and prestige.

5. Three children between the ages of two and four are playing in the yard. Mary is riding a tricycle; Elizabeth is engaged in digging a hole in the ground with a large spoon; and Jack is climbing a small tree.

a. Most, if not all, of this is play in a relatively pure form and is highly essential in developing coordination of movement essential to more complex activity.

b. Play of this type is disorganized and of little value. More adequate supervision and planning is essential if play is to have very much value to the growing organism.

c. This play is chiefly social in nature and is laying the foundation for more and more complex social behavior.

6. In competitive sports such as basketball or volleyball—

a. the dominant motivating force is the desire of the youth for exercise.

b. the desire for social recognition enters as an important motivating force.

c. the desire for social prestige becomes the dominating force, so that there is little, if any, "functional exercise."

7. Social prestige normally is enhanced—

a. by competition in unselected groups, regardless of the outcome.

b. by successful competition with others of similar potential.

c. by competition with persons of ability superior to the individual concerned.

8. The attainment of social prestige is an essential to the mental health of all persons. In school this is facilitated—

a. by setting the same goals for all, so that each has a fair chance of success.

b. by a grading system based upon the quantity of work com-

pleted, so that one's grade is determined by the amount of work accomplished.

c. by a differentiation of goals so that success is in relation to ability to achieve.

9. In the primary grades the best way of meeting the need of children for physical activity—
   a. is to provide for such activity primarily through definitely set physical-education periods.
   b. is to provide situations which allow for considerable physical activity within the classroom as well as during special periods for exercise.
   c. is to provide for systematic physical exercise under the direct supervision of an adult specially trained in physical education, and in a specially equipped gymnasium.
10. In regard to the relationship of physical well-being and the actual ability to accomplish school work successfully—
   a. so long as a child is not actually sick his physical well-being does not materially affect his work in school.
   b. experiments have demonstrated that a tired or hungry child is incapable of achieving success in mental activity.
   c. while being tired or hungry does not prevent "clear thinking" under strong motivation, it does have a detrimental effect upon learning in school if the physical condition is extended over a considerable period of time.
11. Georgia has been in poor health for several years, but now is nearing complete recovery. She is quite inept at playground games as she has not been allowed to participate in them until recently; consequently, she is not accepted willingly on teams. The result is that she spends much of her recess and noon time in the classroom studying and, by so doing, is able to excel most of her classmates in academic learnings. From the point of view of teacher and parent reaction—
   a. it would be better to encourage Georgia to continue her excessive efforts on the academic aspects of her school life rather than to strive for acceptance on the playground.

b. it would be desirable to help her learn to play the various outdoor games with enough skill so that she would be accepted on the playground as well as in the classroom.

c. it is relatively unimportant whether or not she is accepted on the playground as she is able to compensate by excellent work in the classroom and thereby achieve that necessary feeling of "belongingness" essential to her mental well-being; consequently, no particular teacher-parent action is considered necessary.

Section II

Directions: The following items relate to providing for general needs. Some of the statements and described situations are in harmony with modern psychological thought; others are not. On a separate sheet of paper write the word "agree" if you believe the statement or the described situation to be in harmony with modern psychological thinking, or "disagree" if you believe otherwise, together with reasons for your agreement or disagreement.

1. During 1947–1948 the Freedom Train made a tour of the United States for the purpose of instilling and awakening a greater love for the ideals of democracy through providing an opportunity for all to observe the treasured documents of our democracy. This should have a very great and lasting effect upon all those who take the time to visit the train, and should attain the desired ends.
2. Juvenile delinquency often results from the need to attain social recognition. Such delinquency could be reduced greatly by a more adequate and intelligent program on the parts of community and school in providing for the needs of adolescent youth.
3. From the point of view of developing well-integrated personalities, the conventional school most probably has more to offer than the "progressive" school, as the former is much more concerned with preparation for living in an adult world.

4. Miss Jefferies and Mrs. Atkinson teach in the fifth grades of two of the elementary schools of a small city. Miss Jefferies so guides her group that there is a great emphasis upon group action and cooperative endeavor in the various learning situations of the class. Mrs. Atkinson believes that children must learn to compete successfully with each other; consequently she stresses individual effort combined with competition with others of the class to see who will earn the high grades and who will receive the low marks on report cards. Psychologists probably would agree that Mrs. Atkinson was more realistic in her approach and that her classroom program would make the greater contribution to social integration.
5. John has a great deal of ability in the field of music, but does very poorly in his mathematics. This probably results from a lack of interest in mathematics, as normally one would expect him to be as capable in one area as in the other.
6. General needs cannot be met by setting up identical goals for all as some children learn much more rapidly than others in any curricular field; consequently, what may be an impossible goal for some to attain may be "too easy" to challenge certain others in the same class.

SUGGESTED READINGS

Chittenden, Gertrude E.: *Living with Children,* The Macmillan Company, New York, 1944. Chaps. V–VII.

Hopkins, L. Thomas: *Integration, Its Meaning and Application,* D. Appleton-Century Company, Inc., New York, 1937. Chap. IX.

Inskeep, Annie D.: *Child Adjustment in Relation to Growth and Development,* D. Appleton & Company, Inc., 1930.

Paterson, Donald G.: *Physique and Intellect,* Century Company, New York, 1930. Chap. VIII.

Progressive Education Association, Commission on Secondary

School Curriculum and Committee on Workshops: *The Personal-Social Development of Boys and Girls,* Progressive Education Association, New York, 1940, Part 1.

Scham, Max, and Grete Seham: *The Tired Child,* J. B. Lippincott Company, Philadelphia, 1926.

Stratemeyer, Florence B., Hamden L. Forkner, and Margaret G. McKim: *Developing a Curriculum for Modern Living,* Teachers College, Columbia University, New York, 1947. Chap. V.

CHAPTER VIII

Individual Abilities and Special Needs

PROBLEMS

1. What are the fallacies in the conventional concept of the "average" child?

2. To what extent do individuals differ in potential in any given learning area such as music, mechanics, or mathematics? What is the significance of this to classroom teaching?

3. To what extent does a child differ within himself in his potential in various fields of learning? What, if any, significance does this principle of trait differences have to the classroom teacher?

4. What are the conditions essential to the development of a potential for learning? Can it be said that either heredity or environment is of greater importance? Explain.

5. What is the functional interpretation of intelligence? In what way is the term "general intelligence" often misunderstood and misused?

6. What is meant by the statement that "the curriculum must be adjusted to the child?" How does this philosophy of education differ from conventional curricular practices?

7. What are the dangers of standardized assignments for all? How can instruction be differentiated to fit the needs of individuals?

8. In what ways are the experiences of the conventional school inadequate to meet the needs of youth?

9. To what extent need there be a "commonness" of the experiences of pupils? Does this mean that experiences must be identical? Explain.

DISCUSSION

The Concept of the Average Child

A curriculum consisting of a sequence of required courses, each of which consists of a standardized body of subject matter, presupposes a degree of similarity among the children for whom it is designed which allows for no significant differences in either needs or abilities. It is conceived to suit the purposes of the "average" child.

The term "average" is a statistical concept indicating the central tendency of a group, the point around which the individual members may be arranged. If the height of 250 boys is measured, their average stature may be calculated by adding together the individual measurements and dividing this total by 250. It is obvious that the resulting value need not represent the actual height of any boy in the group; it is merely a value which expresses a common tendency. In this respect it is similar to the median, which is a point above and below which an equal number of cases occurs after they have been arranged in ascending order. In this illustration, the median would fall halfway between the heights of the 125th and 126th boys when arranged in order of size. The average

is a statistically convenient measure whose coincidence with the actual measurement of a member of the group is purely accidental and insignificant.

It should be noted also that the average would be precisely the same value if the tallest boy were two inches taller than he is, provided the shortest were two inches shorter, and that the median would be identical if we substituted an eight-foot giant at one end and a three-foot midget at the other. As an indication of the characteristics of the group at either end away from the center, the average has no value whatsoever. Other concepts are needed to evaluate the significance of individual differences, and measures of central tendency must be supplemented by measures of dispersion or variability—deviation from the average or median—in order to provide an accurate indication of group characteristics.

The predetermined and standardized curriculum of the conventional school of necessity was designed to serve the largest possible number of cases, and thus it was forced to fit itself to a group ranging around the average and varying from it only to a limited extent in either direction. Extreme deviation, high or low, could not be taken into consideration, because this would have destroyed the curriculum's usefulness in the opposite direction. By definition, any system based upon the concept of averages has applicability limited to the narrow range clustering around a central point. Fluctuations within certain limits are indicated by the grading system, which expresses numerically the extent to which the individual child adheres to, excels, or falls short of the expected performance of the average. This average, or standard, however, is based on a concept containing some of the characteristics of many children but not actually representative of any one child; consequently, we have a situation in which the system is adjusted to the needs of no individual in particular, but made to fit an abstraction. In each case, therefore, it is a matter of applying the set standards as effectively as possible to the abilities and needs of an actual child, with the understanding that they cannot be expected to apply exactly to anyone and that they are

woefully inadequate for those who deviate to any great extent from the average. The situation shows little or no difference from that of a cobbler who would manufacture shoes on a last which is a composite of the foot dimensions of all of his customers, none of whom actually has a foot of exactly the same size and shape as the cobbler's last. The resulting product, though being an admirable "average" shoe, will be too short for some, too long for others; too broad for one, too tight for another; it will pinch one client here, another there—possessing some of the required characteristics of many different pairs of shoes, except through mere coincidence it will not accurately fit any of the cobbler's customers. Some may be able to wear it with slight discomfort; others will be quite incapable of wearing it at all, but no one will consider the shoe exactly right.

Now there is no reason at all why a cobbler should proceed in this manner. Assuming that all his customers want the same kind of leather and pattern, he can still make the shoe to fit their individual dimensions. More than likely, however, his customers will have different needs as well as different foot shapes and sizes, so that he must be prepared to make hunting boots and evening pumps, oxfords and high-top models; to use fine and coarse leathers, to make black and brown and white shoes with plain or fancy toes and high, low, or medium heels. It would be absurd to say that one type of shoe is better than another, because each serves its intended purpose and the needs of the wearer, and, however unsuitable to the requirements of others, each is a useful pair of shoes to its owner. Of course it is possible to prescribe the consumer's needs and thus limit the range of available choices, as has been done in Soviet Russia and was done in Hitler's Germany. In this country, however, there is a definite feeling that each person's requirements may differ from those of others and that coercive legislation of needs, except in times of national emergency, would constitute a violation of the rights of citizenship. Our people insist that their shoe stores carry a complete line of all sizes and styles for all purposes, and that the selection should be left

to the purchaser and be determined on the basis of his own preference and need. This is not to say that each child is capable of choosing his shoes wisely; therefore his mother goes to the store with him and bases her choice on the present needs of her son with due consideration for his future growth; or, if he is particularly difficult to fit, she consults a foot specialist who may prescribe a particular brand of shoe or advise her to have them made to order.

The analogy implies that any educational system based on "average" requirements falls short of being adequate because no actual child has average needs and average abilities any more than he has average feet. On the contrary, children differ from one another so greatly in abilities and interests that no curriculum based on a concept of the average child can possibly be adequate.

True, many types of experience are and should be common to all children. For instance, any individual living in the United States is going to be greatly handicapped throughout life if he does not learn to read well enough to meet the demands of daily living and if he does not develop sufficient mathematical ability to solve the common problems of everyday life. Again, if this is to be a well-integrated social order, all children must have the types of experiences that lead to an understanding of democracy and democratic institutions and which will develop desirable ideals and attitudes. But even here all children cannot and should not be expected to read with equal rapidity or degree of comprehension, nor can all develop the same depth of understanding of the meaning and functions of democratic ways of living.

While it is true that there are certain lines of growth, commonly known as the "aims of education," along which all children should develop to a considerable extent, there are many types of learning experiences which may have little value to certain children and yet be highly significant in the lives of others. For instance, it may well be argued that all children should have vital experiences in the field of music, art, and other aesthetic areas and that all children need to develop certain concepts and abilities in the field of mathematics. There is no more justification, however, for insisting that

all high-school children study algebra than there is in requiring that all pupils learn to play a musical instrument. On the other hand, algebra may be most highly valuable to a high-school student particularly interested in mathematics or who sees a need for such mathematics in his life plan; in the same manner, learning to play a particular instrument may be a most needed learning activity for a child with particular musical ability, or who expects to make music his vocational field.

General Ability

Contrasted to the concept of the "average" child is the belief that each individual is the possessor of a unique combination of various aptitudes by virtue of which he is characteristically distinguished from others. These aptitudes are not to be thought of as ready-to-function behavior patterns, but rather as potential capacities which, with proper motivation and opportunities, may develop into actual achievements.

General ability to make adequate adjustments in problematical situations and to make a desirable choice from several possible alternative modes of behavior is conventionally referred to as "intelligence." Intelligence, broadly interpreted, is not a predisposition to act in a given manner, but rather the ability to respond with due regard to the exigencies of the situation and to one's own best interests. Needless to say, this capacity is capable of being enhanced through experience in making adequate adjustments, but it appears certain that limitations to its development exist in the form of biological conditions which are predominantly of hereditary origin. Until recently these restrictions loomed large in the concept of intelligence and threatened to obscure its real nature as *potential* capacity, so that it was thought that it constituted an inherited *actual* capacity relatively unaffected by training and experience. Extensive research has demonstrated that much leeway exists for improving this capacity to an extent unsuspected by earlier investigations.

The relationship between the two factors which determine intellectual ability becomes clear when we recognize its dependence upon both structure and function. Obviously, only what is structurally present can be expected to function; on the other hand, only adequate usage of the structure can lead to efficient functioning. A child born without legs never can learn to walk normally because of a structural deficiency; but the fact that he is born with two legs does not make him an expert runner until his structure has been further developed by suitable functional experiences. It can be said that any nondeficient child possesses the *potential* capacity to become a runner; whether this potentiality is developed into an actual skill depends upon training whereby his structural equipment is exercised. Even so, not all can become exceptionally fast runners, even under the most favorable circumstances.

Adequate structural development implies functional capacity. Through cell division and maturation, organic cells grow to be ready for use, though of course not all at the same time. This growth, whether or not supplemented by exercise, is the effect of the interaction of suitable environmental conditions and inherited growth potentiality. Every action of the living organism, therefore, depends upon (1) inherited potentialities, (2) prepared for use by the growth process, and (3) made effective by functional experience.

The argument as to the relative importance of hereditary and environmental factors for individual development appears to be a wholly useless one. Every farmer knows that a superior quality of grain can be developed only from superior seeds planted in a superior soil and grown under favorable conditions of temperature, moisture, and the like. Poor-quality seeds may develop into better plants by receiving excellent care and having been placed in fertile soil, than if they are left to themselves; but no amount of care can make these plants the equals of those raised under the same conditions from the best quality seeds, because the potentialities of superior characteristics are not present in their germ cells. On the other hand, neglect may cause even the best seeds to grow

into inferior plants, because the potential superiority of their germ cells is not utilized effectively.

Just so, the characteristics present in human germ plasm constitute potentials which, under favorable conditions, may be brought out in actual form, yet may remain undeveloped when conditions are less favorable. Nutrition, physical environment, and opportunity for rich and varied experiencing, are factors which affect the final outcome, but they cannot supply missing or inadequate potentials.

The term "potential" has been used several times and should be explained further. In the sense that legs constitute potential walking and running equipment, other parts of the organic structure are potential equipment for engaging in activities for which the possession of these parts is a prerequisite. To this extent, and to this extent only, does heredity determine the characteristics of the child's development and behavior. What is heritable is present in the genes and, when the fertilized ovum has matured into a newborn infant, is to be found in his organic structure in either developed or potential form. The entire hereditary process, it should be remembered, is physiological. Naturally, through their particular constitution, these inherited cells may predispose the individual to a particular type of development or behavior, but only if conditions are favorable for such results. Psychological or physical characteristics are not heritable *as such;* predispositions, in the form of structural peculiarities, are. This, then, is what is meant by a potential: a structural characteristic which, under conditions favorable for such development, leads to certain actual abilities or physical traits. Intelligence, painting, and tennis playing have this in common: they develop in the individual as a result of the interaction of heritable potentialities and favorable environmental conditions, including temperature, nutriments, exercise, and many others. Lacking the opportunities for development, they fail to materialize even in the person in whose genes they are potentially present.

The potentials of intelligent behavior are structural characteris-

tics which make possible adequate adjustment if effectively utilized. Much more than brain cells is involved, for such adjustment presupposes a well-functioning organism as a whole. This has been amply demonstrated in the general physical superiority of children of superior intellectual capacity. Yet structural excellence alone is not enough, as is apparent from the variations in accomplishment resulting from differential opportunities provided for children with nearly identical hereditary potentialities.

Capacity for intelligent adjustment is not a unitary quality which a certain child possesses to a greater or lesser degree, but is a composite of many different factors. At least one of these factors is apparently present in all types of intelligent responses, while the other factors may differ in individuals whose intellectual level is considered similar, and in different intelligent responses made by the same individual. This accounts for the widely varying achievements of persons of equal measured ability and for the wholly inadequate predictions of the future success of children when based on the results of tests of general ability. Since these measures professedly indicate only one dimension of capacity, they should be supplemented by others if an accurate evaluation and a dependable prediction are to be obtained.

It has been shown abundantly that previous achievements are the most reliable indexes of future accomplishments, if the conditions surrounding the individual do not change materially. This, of course, is precisely what would be expected. Behavior tendencies are specific for the situations in which they manifest themselves, and conclusions drawn from performances under test conditions which are wholly different from the child's usual environment are for obvious reasons less dependable than those based on his previous performance under more similar conditions.

Probably the greatest confusion concerning the nature of intelligence has arisen as a result of the use of the word as a noun. It would be better if it were more generally used in the adverbial form in connection with activities in which an individual engages; for instance, he *acts intelligently*. When used in this manner the

real significance of the word becomes clear: it refers to a way of doing certain things. One person may design electrical appliances more intelligently than another, but the latter may excel by being able to engage more intelligently in philosophical reasoning. Two attributes thus stand out: (1) intelligence is a *relative* concept and (2) it is specifically demonstrated in *concrete* situations. General intelligence tests attempt to measure the elements common to different situations in which the individual may display intelligent behavior; they cannot be expected to supply accurate information concerning the effectiveness of his adjustment in specific situations. Such information can best be obtained on the basis of past performance, either as shown in records of achievement, or from tests designed for that purpose.

Special Abilities

Assuming that the child potentially is capable of engaging in a given activity, whether or not he develops ability in this field to the full extent of his capacity depends on his physiological growth, his previous experiences, and his present opportunities for learning. It has been said above that experiencing of mastery and success leads to attitudes and interests favorable to further exploration and growth, and that such experiences can be brought about by providing adequate opportunities in line with the child's present needs and related to preceding successful experiences.

The wide differences with regard to reading ability found among children of the same age and of apparently similar general capacity illustrates this point. An environment in which the child is surrounded by books which are of interest to him and which employ a style and vocabulary well adapted to his linguistic ability and to his level of social maturity is conducive to his continuous experiencing of reading so that his ability under capable instruction is fully developed. Especially is this true when others in the home environment demonstrate their interest and capabilities by reading and discussing books and other reading materials in his presence. Whatever his potential ability may be by virtue of his

sensory and neural equipment, its maximal development will be more nearly approached under these conditions than if the environment provided less stimulation.

Musical ability is another clear example of the great importance of suitable environmental stimulation, especially at an early age when basic energies are being conducted into specific channels. Parental example, wise guidance, and the availability of suitable instruments readily may develop whatever musical ability is potentially present. In the absence of such favorable conditions, the child's energy is just as readily diverted into playing with marbles, roaming the streets, or pulling the cat's tail.

Given optimally developed abilities, however, wide differences between individuals will continue to exist, differences due to discrepancies in potentiality rather than to inequalities of opportunity. Actually, differences in available opportunities always are added factors influencing the development of abilities, so that there is no sure way of determining adequately whether a learning inability is due to lack of suitable experiences or to the lack of adequate potentials essential to that type of behavior—no way, that is, short of providing a more advantageous environment in which whatever capacity may exist is adequately stimulated. Precisely that is what has been done experimentally in the case of children placed in foster homes or institutions presumably better designed to meet their needs than the parental home. Unsuspected abilities frequently have manifested themselves as a result of this change. Behavior habits developed in early childhood often are too well established to be counteracted by subsequent experiences; nevertheless, results obtained in adult training classes, for instance those conducted by the WPA and by special training projects in the U.S. Army, have indicated that even middle-aged persons may be unaware of the existence of potential abilities until suitable opportunities for their development are available. Some remarkably good examples of painting and sculpture have been produced by unemployed people whose occupational experience of the past had been limited to gross manual labor. Many

enlisted men have surprised their families by writing letters home within several months after they had entered military service as total illiterates.

Special Needs Based on Deviations

In respect either to special abilities in certain fields or the common ability factor known as general intelligence, appreciable differences exist among the members of a school population, even among those of approximately the same age and the same experiential background of previous school training. Unless we choose to ignore these unavoidable and highly desirable differences, arrangements must be made to respect the differential needs resulting from them and to modify available experiences in such a manner that benefits can be derived by every child in accordance with his own capacity and needs.

The activities of the modern school present an abundance of opportunities for the utilization and development of special abilities of all kinds and levels. It is the responsibility of the teacher in the school of today to so understand each child in his classes that he can guide his pupils into learning situations conducive to optimal development of special abilities. In the development of such learning situations, the teacher should utilize demonstrated ability with a view to its further perfection, but should also provide experiences leading to the development of possible abilities which have not yet manifested themselves.

The pupil, for instance, who has demonstrated high ability in mathematics in comparison with that of his classmates must be provided with opportunities designed to utilize this superiority if his mathematical experiences are to be most worth while and if maximum development is to be attained. It must be remembered that the need for recognition is a potent motive and that successful experiences determine largely the future course of interests, attitudes, and achievement. The teacher, then, must make available activities and materials in the field of mathematics adapted to the pupil's level of ability, which provide a challenge to him and pos-

sess adequate motivation for mastery. Only if this is done can it be said that the learning situation fulfills the requirement that educational experiences be related to present needs, be based on past experiences, and be designed to lead to further growth.

Similarly, experiences must be planned for pupils of lesser degrees of mathematical ability on the basis of the above considerations. A program must be variable enough to enable each individual child to work with problems and materials which are meaningful to him and which lead to further mastery of related materials if the maximal growth of each member of the group is to be obtained. Learning situations planned without reference to individual interests and abilities are equally undesirable whether the child's deviation is in a superior or inferior direction. A further illustration will make this clear.

The teacher of a ninth-grade general science class administered a standardized reading test with the following results: 8 of his 32 pupils read with a degree of comprehension less than that of a beginning seventh-grader. On the other hand, 9 of his pupils made scores equal to or better than the average tenth-grade pupils. The grade level of the remaining 15 pupils was from 7.2 to 9.9, inclusive. Making the very doubtful assumption that the ninth-grade general science text used by the class is written at a ninth-grade level of difficulty, it is obvious that there are several members of the class who cannot possibly read this text with understanding. It is equally certain that the text is too simple to prove challenging to pupils of high reading ability. While the use of the text as required reading might be defended for approximately half of the class, it is asking the impossible to expect several of the pupils to read it with understanding, while several others can "loaf" and still make a good showing.

This is an usual and entirely typical classroom situation in regard to reading ability. Certain it is that any program of teaching based primarily upon the use of the text is indefensible both in terms of development of further reading ability and of gaining scientific knowledge. Further, there is no legitimate reason why

all students in a class should read the same pages, chapters, or even the same book. Let us suppose that the particular topic for study is "Power in Our Present Civilization." The important thing is not that all should master the body of subject matter on power but, rather, that each pupil should grow in his understanding of the relationship of power to our advancing civilization; that he modify certain attitudes in relation to this important aspect of modern living, and that he increase his understanding of related scientific problems. Much of this learning should and will grow out of activities other than reading. As this illustration is concerned primarily with the reading curriculum, however, that particular learning activity will be discussed, largely to the exclusion of others.

There are available many different books, magazine articles, and pamphlets dealing with power and written for pupils from the first-grade level to that of graduate students in college. Some excellent materials are available in various forms which can be read with understanding by pupils with fifth-, sixth-, or seventh-grade reading ability. If the pupils of low reading ability are to make progress in developing their capacity to read and if they are to utilize this ability in the gaining of scientific knowledge, they must be provided with materials on power which can be read by them with understanding; namely, with materials of seventh-grade difficulty and less. On the other hand, if the work is to prove challenging to them and if they are not to be allowed to fall into lazy reading habits, pupils of high reading ability must be encouraged to utilize the more difficult reading materials. Several of these pupils can and should utilize materials written for senior-high-school students and for adults. Magazine articles of a scientific nature, if not too technical, are entirely within their realm of understanding. What should be of primary concern to the teacher of this particular class, so far as reading activities are concerned, is that the reading should contribute to the educational development of each individual pupil and that there be definite growth in the development of those understandings, attitudes and apprecia-

tions, and essential abilities which make up the aims of the teachings of science in general and of the unit on power in particular. If this is accomplished, the teaching is well done. Reading activities, however, will make real contributions to this end only if they are adjusted to the needs of the individual pupil.

The requiring of all students to read the same materials not only fails to accomplish desired ends, but actually contributes to undesirable learning on the part of those pupils who find the assigned task impossible, or who find it too easy to challenge their best efforts. Too simple materials do not adequately fill the needs of the superior deviate because no sense of mastery and no recognition of successful achievement result from dealing with them; too difficult readings fail to give inferior deviates the success experience which they need so urgently to develop the confidence in their ability, however limited, and to cultivate the interests which are prerequisite to continued efforts in further mastery. A more important objection to forcing the less capable pupils to occupy themselves with unsuitable tasks, however, is that the dissatisfaction with their own achievement and the feeling of frustration resulting from failure to obtain recognition tend to spread to other areas. The resulting sense of inadequacy affects their attitudes towards other educational experiences both in and out of school. The child who has failed to achieve mastery in a reading situation because the material involved was too advanced, or because it did not at that time appear to fill a need of which he was aware, does not as a rule expect to experience success in related activities. Yet, needing such experiences because of the urge to attain prestige and self-confidence, he is forced to look elsewhere for these satisfactions. Such a child, consequently, attempts to attain his ends by other means to compensate for his academic inadequacy.

Truancy, petty thieving, lying, bullying, and sulking are some of the activities in which individuals both of superior and inferior ability tend to engage in order to attain the satisfactions which often are denied them in school and elsewhere. Such outlets lose their appeal to a child whose needs for recognition and success are

provided for adequately in the home, school, and community. This places the credit or blame for asocial and antisocial behavior where it belongs, that is, squarely on the shoulders of those whose duty it is to guide youthful behavior into channels consistent with the interests of the child and of society. No child is inherently "bad" or "good," but each child has certain definite needs which must be satisfied if personal integration and social effectiveness are to be attained and maintained. Moreover, each child has a vast store of potential energy but inadequate experience to guide it into desirable channels. If the adults fail to supply the much-needed outlets for this energy in a manner leading to the attainment of his essential goals, the resulting mismanagement of his affairs cannot be attributed to the child's willfulness or perversity, but should be laid at the door of bungling adults.

The Integration of Abilities

The well-rounded individual presents a composite picture of numerous abilities which he possesses in varying degrees. Because of the common factor present in many abilities, there is a tendency for those who are outstanding in one field to do better than average in related types of learning activities. Of course, general superiority depends upon adequate opportunities, so that it is entirely possible that a child may display decided ability in certain areas in which he has obtained abundant experiences, while his potential abilities in other respects have remained undeveloped. It becomes a major function of the teacher, consequently, to provide situations which will lead the individual into new experiences and to face problems not met before.

Although the level of performance attained in a given field is to some extent indicative of the type of achievement to be expected in other areas, especially related ones, abilities do not carry over unless opportunities are provided for the independent development of these other abilities through experience. An exception to this statement occurs when two skills or activities have basic factors or specific elements in common, in which case mastery of such fac-

tors and elements may be transferred. For instance, a thorough knowledge of French grammar and vocabulary carries over in a considerable degree to the learning of Italian because the grammatical principles and word roots are closely related. Specific experiences with Italian are necessary before proficiency in that language can be attained, but the common elements facilitate mastery and make it much less difficult than would be true if the individual had obtained no preliminary skill in French.

Such is not the case, however, with French and German, because the common elements are much less obvious. Certainly, as was indicated above, such transfer is absent when the two situations are wholly dissimilar—for instance, in learning algebra and learning to wrestle.

As discussed above, in addition to continued instruction in those fields in which he has already shown ability, the child must be encouraged to explore new areas of learning. It is essential that he achieve familiarity with other types of activity in order that he may be able to judge their relative importance in his scheme of life. It would be unfortunate indeed if our schools merely continued the pattern established by the parents, or by the school of yesterday, by providing further experiences in familiar and conventional activities only. Experimentation with unknown types of activity must be encouraged if the teacher and the pupil are to reach valid conclusions concerning the range of the child's abilities and arrive at an intelligent interpretation of his developmental capabilities; and if the child's effectiveness is not to be hampered by disproportionate achievement in some respects, coupled with glaring inadequacies in others.

The unfortunate results of narrow experiences and limited opportunities are evident in the case of persons displaying thoroughly adequate behavior in some situations and making quite unintelligent reactions in others. We are accustomed to make allowances for such inadequacies by pointing to achievements in other respects which, we say, more than make up for them. Nevertheless, the fact that abilities have been well developed in some areas in-

dicates forcibly that a wider distribution of experiences would have resulted in a more balanced adjustment. Nor would such a rounded program of activities necessarily have interfered with the excellence of performance in the person's field of special ability; rather would it have been a distinct advantage to him by relieving some of the tensions resulting from inadequacy in other fields.

The scientist, for instance, whose abilities in motor coordination have remained relatively undeveloped and who, in consequence, engages in no sports or other physical exercises, may well develop symptoms of organic deterioration which could have been postponed by a more balanced background of experience, so that his usefulness as a scientist would have been affected favorably. The industrial magnate whose capacity for relaxation has been allowed to remain dormant will experience tensions and temporary periods of inability to work which would have been unnecessary had his background of experience included training in systematic and effective relaxation. The worker whose education has been limited to developing mechanical skills finds himself unprepared to spend his spare time productively, so that he cannot effectively compete with the colleague who, by taking special training in night classes, gets in line for the foreman's job. In each of these cases the individual would have achieved a more balanced personal development, and a greater degree of integration of his activities, had his experiences covered a wider area; and his general effectiveness would have been increased.

The above discussion should not lead one to the assumption that pupils who score high on so-called general intelligence tests will do equally well in all fields of endeavor provided they have a desire to succeed in each. As pointed out in some detail in Chap. IX, such tests are measures of what might be termed academic ability. As such, they do provide a rather reliable index of one's learning potentiality in academic fields, although even here differences exist. They definitely should not be considered as measures of ability to learn in such special fields as music, physical education, or even the mechanical arts.

It becomes clear, then, that effective educational practice requires that each child be provided with experiences which (1) further develop already demonstrated abilities and (2) awaken dormant capacities which will contribute to his all-round development and integration. Only when this is done can we expect to fulfill the final purpose of education: to develop to the fullest extent each child's potentialities along desirable paths.

SELF-EVALUATION EXERCISE

Section I

Directions: The items below relate to the discussion of individual abilities and special needs. Each item consists of a statement of a problem or a psychological fact requiring completion by the selection of one of the three possible phrases, clauses, or sentences listed as *a, b,* or *c.* Read each item carefully, then do the following:

1. Select the phrase, clause, or sentence which best completes the statement or which provides the best answer to the problem of the item concerned.
2. Write down the symbol of the "best answer" (*a, b,* or *c*) on a sheet of paper, together with your reasons for selection, for each item of the exercise. Tell why you believe the answer you selected to be better than the two you rejected.

The fact that one of the three possible answers to an item is considered to be the best answer does not mean that the other two necessarily are wrong or false. Such may be the case; however, it may be that the "best answer" merely is more nearly complete than either of the other two, or that it is more in harmony with modern psychological thought. Remember, don't search for "right" and "wrong" answers of completions to an item, but, rather, for the *best* one of the three possible choices.

1. In regard to the so-called concept of the "average child" it is generally accepted by psychologists that—

a. children do fall rather naturally into three groups—the superior, the average, and the below-average.

b. statistically one cannot arrive at an average of any trait or group of traits; therefore it is statistically incorrect to think of an average child.

c. while it is entirely possible to calculate an average from the results of the measurement of a given trait or of a group of traits, it is only through coincidence that any particular child will fit the prescription of an "average child."

2. From a psychological point of view the requirement that children meet certain set standards before being graduated from the elementary school—

   a. can be justified on the grounds that there are common needs for all children; consequently, such set standards are necessary for the welfare of the pupil.

   b. cannot be justified, as any such standards will be entirely too high for many children to meet and too low to challenge the best efforts of many others.

   c. can be justified only if most of the pupils are preparing for college and must meet the standards set for college preparatory courses.

3. The point of view that there are needs common to all children carries with it the curricular implication that—

   a. while such needs are common to all, equal growth in the areas essential to the satisfaction of such needs is neither necessary nor possible.

   b. there are set standards of achievement in areas such as reading and science which must be met by all.

   c. as most of these needs must be met primarily at the secondary level there is, consequently, a great need for lengthening the secondary-school period.

4. In regard to the relationship of a child's potentials to hereditary factors it is generally agreed—

   a. that such potentials are rather rigidly set by innate factors.

b. that they are relatively unaffected by hereditary factors.
c. that potentials are limited in a general way by hereditary factors, but not rigidly set.

5. So far as the development of a child's potential in a given learning area such as the field of music or art is concerned,
   a. experience is an absolute essential to the development of the potential, regardless of its strength or weakness.
   b. the child cannot help but develop the potential quite fully as it constitutes a drive to action which he cannot resist.
   c. a potential is primarily a matter of one's environment and is entirely dependent upon experience for both direction and rapidity of development.
6. As an indication of possible future achievement in any given field of learning,
   a. the best instrument for prediction is the intelligence test.
   b. past achievement is the best evidence of probable future growth, provided the child has had fairly wide opportunities for experiencing in the particular field.
   c. the results of special aptitude tests are the most reliable means of predicting future growth.
7. The most acceptable concept of the nature of general intelligence, or, better, of the potential for intelligent action, is—
   a. that it consists of a general potential supplemented by special potentials.
   b. that it consists entirely of a general potential which is dependent upon environment for its particular line of growth.
   c. that it consists primarily of the sum of a number of special potentialities.
8. Of the statements below, the more acceptable concept of so-called "general intelligence" is that—
   a. it is the ability to adjust to situations requiring abstract "thinking" and, as such, is dependent upon inborn potentials supplemented by experience. It is a relative concept and is dependent upon both hereditary and environmental factors.

b. it is the ability to adjust to life situations. It is primarily an hereditary characteristic and is little affected by environment.

c. it is the ability to adjust to the problems of everyday living. Its development is subject primarily to environmental factors, unhindered by hereditary limitations.

Section II

Directions: The following items relate to individual abilities and special needs. Some of the statements and described situations are in harmony with modern psychological thought; others are not. On a separate sheet of paper write the word "agree" if you believe the statement or the described situation to be in harmony with modern psychological thinking, or "disagree" if you believe otherwise, together with reasons for your agreement or disagreement.

1. Joan and William, so far as can be determined, have high potentials in the general area of the arts and crafts. In the senior high school Joan has become very interested in interior decorating and plans to follow that as a career. William, on the other hand, is more interested in commercial art and plans on going into advertising. This difference in interest most likely represents a real difference in kind of potential rather than being a result of experience.
2. Joseph's mother believes that Joseph has a very high potential for instrumental music. There is no entirely sure way of determining whether or not she is correct except by assuring Joseph ample opportunity for experience in the field of music over a period of time and under capable guidance.
3. Mrs. Sperry, in her eighth-grade arithmetic class, requires each pupil to complete a given assignment of problems, then provides an additional number of problems for the "better" arithmetic pupils for which she gives extra grade credits. From a psychological point of view this practice is to be recommended in providing for individual differences.

4. George is in the fourth grade of a city elementary school. George gets along well with his classmates, is a leader on the playground, and likes school. However, his academic ability is considerably less than that of most of the others in the class, so his teacher has him reading out of books normally thought of as second- and third-grade books. The teacher believes that it is better to have him in the fourth grade, even though she has to give him less difficult materials with which to work, than to have him back in the third grade where he probably would be about at the average of the class in his reading and arithmetic ability.
5. There are 76 entering freshmen in the first year of a town high school. Regardless of the quality of the teaching in the elementary schools it is to be expected that a fairly large number, possibly from 15 to 20 of the freshmen, will not be able to read and understand materials of greater difficulty level than those which can be read and understood by the average sixth- or seventh-grader.
6. In her eleventh-grade physics classes Miss King is encouraging several of the more capable science students to use more advanced materials and to perform difficult experiments, even comparable to those of freshmen in college. She does this on the theory that they are as capable, academically speaking, as many college freshmen and should be working at this level.
7. In a city junior high school the pupils have been segregated into three ability groups on the basis of academic ability. In the low groups there are large numbers of overage pupils. Many of them are openly rebellious in accomplishing the assigned tasks of the school day; others are of the daydreaming type, quiet but profiting very little by the school activities. This situation normally is to be expected as one always will find a considerable number of children who just cannot or will not profit greatly by attending school beyond the elementary grades. There is not too much that can be done

with them other than to hope that they will absorb enough from the discussions of the class at least to make them somewhat better citizens than they otherwise would be.

8. Normally, a child who is exceptionally capable in the field of mathematics may be expected to be above average in other fields where the learning is primarily academic in character, such as reading or English.
9. As a general rule children who are highly capable in the more academic areas of learning also should be expected to be of high potential in art and music.
10. Marjorie is enrolled in a school that prides itself on its high academic standards; consequently, she spends most of her spare time studying her algebra, Latin, history, and English as she wants to go to a rather exclusive college and knows that she must get high grades to gain entrance. Because of the "carry-over" from one field of endeavor to another this training should be expected to contribute greatly to the development of what often is called "social intelligence."
11. School *A* has developed a curriculum in which competition for grades is stressed. Academic standards are high, and the school is proud of the fact that very few of its students who have gone to college have been flunked out. School *B* has developed a curriculum based on so-called pupil needs and makes no pretense at maintaining high academic standards for all. Any pupil who enters and who makes a reasonable effort can expect to graduate at the end of four years, regardless of his actual abilities in the various areas of endeavor, as almost any pupil can find worth-while activities of a type in which he can succeed. From the point of view of the integration of pupil personality, school *B* has a much more positive program than school *A* and should be expected to graduate well-integrated pupils.
12. Potentials are structural characteristics which require actual experience for their development.

SUGGESTED READINGS

Baker, Harry J.: *Introduction to Exceptional Children,* The Macmillan Company, New York, 1945.

Burnham, William H.: *The Wholesome Personality,* D. Appleton-Century Company, Inc., New York, 1932. Chap. V.

Foster, Josephine C., and Neith E. Headley: *Education in the Kindergarten,* American Book Company, New York, 1936. Chap. XIX.

Freeman, Frank S.: *Individual Differences,* Henry Holt and Company, Inc., New York, 1934.

Gesell, Arnold, *et al.: Biographies of Child Development,* Paul B. Hoeber, Inc., New York, 1939.

Glover, Katherine, and Evelyn Dewey: *Children of the New Day,* D. Appleton-Century Company, Inc., New York, 1934.

Heider, Fritz, and Grace Moore Heider: *Studies in the Psychology of the Deaf,* No. 2., Psychological Monographs, No. 5, Vol. 53, 1941. American Psychological Association, Inc., Northwestern University, Evanston, Ill.

Hollingworth, Leta S.: *Children above 180 I.Q.,* World Book Company, Yonkers, N.Y., 1942. Chaps. XVIII–XXII.

Ingram, Christine P.: *Education of the Slow Learning Child,* World Book Company, Yonkers, N.Y., 1935.

Isaacs, Susan: *The Children We Teach,* University of London Press, Ltd., Bickley, Kent, England, 1935. Chap. II.

Louttit, C. M.: *Clinical Psychology,* Harper & Brothers, New York, 1936. Chaps. IV–XV.

National Society for the Study of Education: *Thirty-ninth Yearbook,* Part I, "Intelligence: Its Nature and Nurture," Public School Publishing Company, Bloomington, Ill., 1940. Chaps. I–XIV.

———: *Forty-third Yearbook,* Part I., "Adolescence," Public School Publishing Company, Bloomington, Ill., 1944. Chaps. VIII, IX.

Skinner, Charles E., ed.: *Elementary Educational Psychology,* Prentice-Hall, Inc., New York, 1945. Chaps. V, VII, XVIII.

———, ed.: *Educational Psychology,* rev. ed. Prentice-Hall, Inc., New York, 1946. Chaps. XV–XVIII, XXII, XXIII.

CHAPTER IX

Relating Experiences to Needs and Abilities

PROBLEMS

1. To what extent are "general intelligence tests" valid as measures of potential learning? What do they actually measure?

2. What are the general principles upon which "mental tests" are based? How are they constructed?

3. What are the purposes for which aptitude tests are used? To what extent and how may they be used in the elementary and secondary schools?

4. Of what value are achievement and diagnostic tests to the teacher? How can they be used effectively to aid the educational process?

5. What are the purposes of social-adjustment and attitude inventories? To what extent can they be helpful to the teacher?

6. What are the chief difficulties involved in any serious attempt to adjust the classroom curriculum to the nature and needs

of the pupils at all levels of the school system? In general, how can it be done?

7. What are the objections to double promotions and failure to promote as means of adjusting child and curriculum to each other?

8. What are the arguments for and against so-called "ability grouping" in school? What are the essential differences between "ability grouping" and "differentiation of curriculums" as means of providing for individual differences?

DISCUSSION

Adjusting the Curriculum to the Learner

The principle of individual differences has been so generally accepted by psychologists that it needs little further elaboration here. Experimental evidence abounds in such quantities that no one who makes any pretense of studying the problems of learning seriously can doubt but that in any unselected group the children differ so greatly from each other in their abilities and needs that no standardized and set classroom curriculum possibly can result in an effective learning situation.

For instance, a hurried glance at a typical class of some 30 unselected first-grade children will reveal approximately the following: In mental maturity, as measured by an individual intelligence test, there will be several years' difference between the most and least capable. The mental ages of several of the children will be 7 years and beyond, while that of several others will be 5 and below. Some of the children will come from homes in which the opportunities for rich learning experiences are exceptional; others will come from homes in which the educational opportunities are most meager. Some will show great promise in such special fields as art and music; others will be unable even to carry simple tunes or to express themselves in any but the crudest ways with the tools of art. The physiological development of some of the children

will be exceptional for their age; other children will be awkward and have great difficulty in making finely coordinated movements. Some will have developed a high degree of socialization for first-grade children; others will be most individualistic and will not have learned to work and play with their fellows. Some will be pugnacious, some afraid of their very shadows.

In the more formal learning areas making up the curriculum of the conventional school, the differences in learning capacity will be great. Several children can and will learn to read readily; for others, progress during the year will be negligible even under superior teaching. Some children already will be able to solve simple arithmetic problems and will be well on their way in the development of mathematical concepts essential to everyday living. Other children will be greatly lacking in mathematical experience, ability, or both. Some children will have developed a high degree of neuromuscular coordination, so that writing, particularly manuscript writing, is learned readily; many of them, however, will find this task most difficult, and some, impossible.

This description could be carried on indefinitely and would apply to any trait or learning area. Not only is it applicable to a typical first grade, but to any grade of the elementary or secondary school, and even college, although in certain areas the range of ability is decreased due to the elimination and retardation of the less capable.

In spite of the fact, however, that we have long recognized the principle that children do differ greatly from one another in their abilities to learn, it is only in comparatively recent years that we have seriously undertaken the task of developing a curriculum adjusted to individual needs and abilities. While it probably is true that a majority of schools and teachers give lip service to the educational axiom that the curriculum must be adjusted to the individual, it unfortunately also is true that schools in general have made tragically slow progress in accomplishing this objective. Most state and city school systems still make special textbook adoptions in such fields as arithmetic, history, and reading

and still require that all children of a given grade study and be examined upon these particular books. Teachers talk of the "fifth-grade arithmetic" and the "seventh-grade geography," while one can go into entirely too many classrooms and find all pupils in a given class working the same arithmetic or algebra problems, studying the same reading or spelling assignments, or practicing on the same penmanship exercises—this in spite of the fact that such practice is diametrically opposed to the doctrine of curricular adjustment to pupil needs and in violation of the principle of individual differences.

If the learning situation is to be effective it must be within the level of insight of the learner. The acceptance of this psychological principle carries with it two important implications: first, that we must determine, at least roughly, the pupils' level of ability in each of the several areas of the curriculum, and second, that we can and will develop learning situations, including the acquisition of needed instructional materials, to accomplish the desired end.

Determining Levels of Possible Achievement

While there is no doubt of the fact that great differences in levels of possible achievement in any given learning field do exist between individuals, it must be admitted that as yet we have nothing but very crude instruments for measuring an individual's capacity and level of achievement in any given field. Considerable progress has been made, and is being made, however, and the outlook is far from discouraging. By the use of objective measuring devices, by controlled observation and recording, through the maintenance and utilization of cumulative records, supplemented by needed administrative reorganization, it is entirely possible for the teacher to develop a sufficiently high degree of understanding of the maturation levels of each of his pupils so that the adjustment of the learning situation to these pupils is a distinct possibility. In short, modern educators are becoming more and more conscious of the need for careful evaluation, not only of individual pupil progress, but of the total learning situation as well.

It is obvious that if a teacher could obtain an exact measure of a given pupil's potentialities in such fields as art, music, mathematics, and in such less tangible areas as social development, he then could develop a curriculum in harmony with the needs of the particular pupil or pupils concerned. In recent years a great amount of scientific energy has been devoted to the development of special aptitude and achievement measures as well as of tests of general ability, and not without considerable success, even though it must be admitted that most of these instruments are still quite crude, and some of doubtful validity. Many of these measures have real educational value if utilized by one with sufficient training in the field of educational measurements. Only a brief and very general discussion of such measures is possible in a book of this type.

Concept of Measurement

Every form of measurement is relative rather than absolute. Length is measured in relation to the standard yard as preserved in the Bureau of Standards, Washington, D.C., and weight in relation to the standard pound. To say that the length of a piece of cloth is 7 is meaningless; to say that it measures 7 yards gives it definite meaning to anyone who, through experience in measurement, has developed a concept of the yard as a standard of measure. Similarly, the measurable characteristics of any object, event, or capacity must be stated in terms of some standard not a part of itself to become meaningful. A score of 78 on a test, for instance, tells one nothing whatsoever unless it is compared with scores on the same test made by others of the same age or grade group. Perhaps these others made scores ranging from 76 to 150, with an average of 104; or they may have fluctuated from 0 to 78, with an average of 51. Only in relation to data obtained from others on the same test does the individual's performance take on meaning, for then it becomes a symbol of his position in the group.

The above discussion is not meant to imply that performance

on all evaluation instruments must be reported in terms of scores to have significance. Certain diagnostic tests are devised to detect specific learning difficulties rather than to determine level of growth in a given curricular field. Again, an attitude scale may be devised to determine what pupils think about cheating, racial equality, smoking, and similar social problems where the results speak for themselves. It still holds true, however, that whenever scores are used to report or record performances, they must be interpreted in terms of established standards to have meaning.

Intelligence Tests

So-called general intelligence tests often are thought of erroneously as being measures of individual capacity for making adequate adjustments in all manner of life situations, and even regardless of the nature of previous experiences. Actually their scope is much more limited; nor do they measure ability irrespective of previous experience. In general, they give a fairly reliable indication of one's ability to adjust himself in academic types of situations and to do rather abstract types of thinking. As such, they are reasonably good measures of one's capacity for success in school; chiefly, however, because the conventional school program is highly academic in character. They are neither reliable nor valid measures of what may be termed social intelligence, nor of one's potentiality in such highly specialized fields as mechanics, music, or the arts and crafts. There is a high degree of relationship between one's ability to make a comparatively high score on a general intelligence test and the ability to do well in mathematics, the social studies, and in learning to read. Consequently, if used by one who understands their limitations as well as their values, such intelligence tests may aid greatly in determining levels of possible achievement in these and similar types of abstract learning situations.

It should be recognized that while intelligence tests are devised to measure general capacity for learning—at least certain types of

learning—they are more closely dependent upon past learning experiences than is generally realized by the average teacher. There is no known way of measuring mental power directly; it is only by measuring the results of learning situations that an indication of a learner's potential ability can be obtained.

For instance, most intelligence tests, particularly group tests, are based upon vocabulary, mathematics, analogies, and similar exercises. Individual intelligence tests utilize everyday-life situations, and one's mental age is determined by the number of given tasks of varied nature which he can perform as compared with the average performance for individuals of a given age. Such tests are based upon an assumption of common backgrounds and utilize a great enough variety of types of experiences so as to be usable in measuring the so-called general intelligence level of farm boys and city boys alike.

To the extent that a particular test is based upon the common experiences of the individual, it is a fairly reliable index of his ability to adjust at least to the types of situations indicated by the test. It is obvious, however, that a test is invalid if these conditions do not hold. For instance, to be valid a test devised to measure the intelligence of the natives of the Congo region must be based upon learning situations common to these peoples and would have very little validity as a measure of intelligence for children brought up in the city of New York. Even within the bounds of the United States itself, no single intelligence test has yet been devised which provides an adequate measure of ability of all individuals of any given age groups. For instance, the ability to adjust to any given situation is so greatly colored by past experiences that a test used to measure the intelligence of an individual born with high learning potentiality but reared in an environment of meager learning possibilities would not be at all reliable, or even valid, unless the test itself were based upon this meager environment, so that the individual's learning is compared to others of the same environment. On most intelligence tests, constructed as they are for very general use, a child reared in an especially favor-

able experiential environment will obtain an intelligence index considerably higher than a child of the same original learning potential, but brought up under much less favored circumstances.

From the above discussion it becomes obvious that, while the concept of intelligence as innate or inborn learning capacity may be acceptable for theoretical psychological discussions, practically speaking one's ability to adjust to any and all types of learning situations is so affected by actual experiences, even in early childhood, that any workable concept of intelligence must encompass a combination of hereditary and environmental factors so interwoven as to be inseparable. The intelligence quotient or other index obtained by administering a well-constructed and standardized measurement of intelligence is a fairly reliable indication of an individual's ability to adjust himself to complex life situations, but numerous exceptions are to be expected.

It is unfortunate that many educators, upon learning that intelligence tests are far from being infallible, have thrown all such tests into the discard. These tests are very helpful in determining an individual's level of learning ability, provided it is recognized that they (1) are rather rough, but fairly reliable measures of an individual's ability to adjust himself, particularly in situations requiring abstract types of thinking, and (2) have very definite limitations in certain fields, such as art, mechanics, or social relations.

Special Aptitude Measures

The educational significance of obtaining a valid and reliable measure of an individual's special aptitudes is readily understandable to anyone who has been engaged seriously in guiding the destinies of youth. For instance, when one considers the immense amount of energy, as well as the money, expended in efforts to teach children to play the piano, the worth of an aptitude test which would measure accurately a child's musical ability prior to the decision to give piano lessons easily can be recognized.

The ability to measure specific potentiality accurately in mechanics, mathematics, languages, and in other learning areas would be an invaluable aid to teachers and counselors of elementary and secondary-school pupils in guiding their learning activities, and in educational and vocational planning.

Considerable progress has been made, and is being made, in the development of special aptitude measures in mechanics, music, foreign language, and other areas, and in determining general vocational aptitudes. These instruments have considerable value in the hands of well-informed teachers, even though it must be admitted that most of them still are quite crude. The capabilities being measured are themselves so highly complex and intangible, and the understanding of the psychological processes involved so inadequate, that it would seem to make highly reliable and valid measures improbable for some time to come. If these measures are used with an understanding of their deficiencies, however, and considered only as one of a number of factors to be utilized in gaining a better understanding of the pupil's potential level of possible achievement, they may serve a very useful purpose. If, on the other hand, these, as well as intelligence measures, are interpreted as accurate indexes of maturation or of specific potentialities, it is better that they not be used.

Social Adjustment and Attitude Measures

It will be recognized that if accurate measuring instruments can be devised which will ferret out certain social maladjustments, corrective measures can be taken which will reduce greatly not only juvenile delinquency, but many other social ills as well. Recently considerable progress has been made in the development of measures of an individual's adjustment to his social group. Most of these measures are of an inventory or questionnaire type, but may involve problem-solving situations as well. In general, they are of value to the extent that full cooperation can be obtained from the individual pupil. For instance, a questionnaire to determine a pupil's attitude toward cheating in school is valid provided the

pupil reacts frankly and honestly, or provided the test is so ingeniously contrived that the pupil does not recognize the true intent. The latter is extremely difficult to accomplish; the former, however, is often possible, provided the individual concerned feels certain that the investigation is for his own good or, at least, that no harmful results will eventuate.

Social adjustment inventories generally consist of numerous kinds and types of life situations with a requirement that the individual being measured express himself as to what his own reaction to each situation would probably be; or they may consist of direct questions which the individual answers with "Yes," "No," or "Doubtful." For instance, the fact that an individual crosses a street to avoid meeting someone he dislikes; that he hesitates to accept leadership responsibilities; that he would rather work for someone than to have his own business; these are, when taken together, indicative of certain characteristics (which are not necessarily and completely undesirable, however, unless carried to an extreme). If the individual's reactions to the test situations are characteristic of his reactions in actual situations, the test is of considerable use to a teacher in the guidance of the pupil concerned. It will be recognized, of course, that if a pupil answers the test items in the way he has been taught he should act and not in the way he actually does react, the test results will be misleading.

Again it should be emphasized that these measures, as is the case with most educational measures, are valuable if considered as one, and only one, of several important factors in the guidance of the learner and in the development of his school curriculum.

Achievement Measures

Achievement measures differ from aptitude measures in that they are devices for the measurement of actual accomplishment rather than potentiality in limited fields of learning; for instance, reading, spelling, or algebra. It is entirely possible and comparatively easy to determine whether or not an individual or group of

individuals can spell the words of a given list correctly. It is somewhat more difficult, but still entirely possible, to construct a test that gives a fairly reliable indication of a learner's ability to solve certain types of mathematical problems, to read certain paragraphs with understanding, or to translate a foreign passage into English. If a given reading test, for instance, is administered to a wide sampling of school children of various grade levels, the averages (norms) for each grade or age level can be calculated. By comparing any given individual's score on this test with these established norms, a fairly reliable indication of a pupil's level of reading ability is obtained.

Achievement tests are extremely valuable in determining levels of accomplishment in such fairly specific fields as reading, writing, spelling, mathematics, and similar areas where rather highly specific and limited skills are, at least, important parts of the aims sought. Their use becomes much more limited, however, and their value much more debatable in more complex learning situations. For instance, a test to measure the extent to which one has memorized the important dates and events of American history or certain geographical facts pertinent to his own and other states is easy to construct; but it is more difficult to determine one's degree of understanding of such a highly complex problem as the relation of specific economic factors to World War II. One either can or cannot add a column of figures correctly or repeat the ten most important dates of American history—provided an agreement can be reached upon which are the ten most important dates. Experts themselves, however, disagree on the relative importance of specific economic conditions as causal factors of world wars I and II nor does even an expert completely understand such factors. Rather, an individual possesses a *degree* of understanding which may be great, as in the case of a noted student of foreign affairs, or practically nonexistent, as would be the case of a newborn infant or of an adult reared in an environment completely untouched by problems of war.

One of the chief criticisms of achievement tests in the past has

been that they were devised chiefly to measure mastery of factual materials. Because of the importance attached to the results of these tests in determining promotions and subject marks, they have exercised an undesirable influence upon the public-school curriculum by forcing undue emphasis upon the purely factual and skill types of learning, with the resultant neglect of the more important conceptual learnings. This criticism undoubtedly is valid, but is no justification for the abolishment of achievement tests, as some have advocated.

Recently great strides have been made in the development of tests to measure the more complex types of learning; for instance, the ability to detect social and scientific relationships, the ability to apply one's conceptual learning in one area to other related areas, and growth in socially desirable attitudes. There is a definite swing away from the purely factual type of test, bringing with it considerable justification for believing that the future will continue to see significant contributions made to the measurement of pupil growth along the lines of the real aims of education; that is, in the development of basic social understandings, desirable attitudes and appreciations, and the abilities essential to effective participation in a democratic civilization.

It should be recognized that reading, writing, spelling, and the ability to solve common mathematical problems are among the abilities essential to everyday life, and that some excellent tests are available which give quite reliable indications of a pupil's level of achievement in these fields. The use of such tests is necessary to good teaching, not only at the elementary but also at the secondary level. It must be emphasized, however, that these skills are primarily tools of learning rather than the fundamentals of education, and that they are of value only as they make possible a more adequate adjustment of the individual to his society and as they open up a fuller and better life for the individual. If these learnings are seen in their proper perspective, carefully constructed achievement tests in these fields are invaluable. To the extent that high scores on these tests become the chief aims of class-

room teaching, either in the first grade or in senior high school, the purposes for which tests were intended are being defeated and their effects become harmful rather than beneficial.

Diagnostic Tests

Diagnostic tests are highly specific in nature, being primarily for the purpose of aiding the teacher in detecting particular learning difficulties on the part of individuals and groups. Their use is confined chiefly to fields of specific skills, such as the mechanics of reading or the processes of mathematics. For instance, a diagnostic test in arithmetic is so devised that it is most helpful in detecting specific difficulties of a child in the processes of division, multiplication, fractions, or in the use of the decimal point. Diagnostic tests and techniques aid greatly in detecting learning "blocks" such as a reversal tendency in reading or confusion in the use of the zero in multiplication.

It should be recognized that diagnostic tests do not give the cause of the difficulty, nor do they point out the remedy. They are like the physician's thermometer or stethoscope; they indicate a condition, but they tell neither the cause nor the cure. The cause must be determined by a careful study of the individual and his educational history; the cure must be dictated by the teacher's understanding of the learning process and of the individual to be cured. Diagnostic testing, for instance, may indicate that a seventh-grade child is a so-called "word reader," but whether this is primarily a result of faulty teaching procedures in the early part of the child's educational career; of physical defects, especially of the eye; of low academic intelligence; or of a combination of causes. is not and cannot be indicated by the test. This the teacher must discover by other means. Again, there is no cure-all for the condition once it is determined. If, for instance, this child's difficulty is due to overemphasis upon oral reading in the early school years, one type of treatment is needed; if it is due to low intelligence or to a physical handicap, the remedial treatment required is considerably different.

To the extent that diagnostic measures are considered primarily as trouble-finders in very limited fields, their use is highly valuable and to be recommended. Numerous attempts have been made in the development of diagnostic tests in such fields as history or science. To date, however, these tests are of little value as the important learnings here are not specific skills, but concepts and attitudes which do not lend themselves to the present types of diagnostic tests.

It should be pointed out here that the social adjustment and attitude inventories are in themselves diagnostic in character and that there are wide possibilities for future development in these areas as well as in the more restricted subject areas of the curriculum.

Adjusting the Learning Situation to the Learner's Level of Maturation

It is one thing to determine the general mental level of the learner as it is indicated by a so-called test of general intelligence and expressed in terms of a mental age (M.A.) and an intelligence quotient (I.Q.), or to determine his level of reading and arithmetic achievement by administering achievement tests; it is something entirely different to develop a learning situation in which the tasks and materials are adjusted to indicated levels of mental development and achievement.

With some notable exceptions, particularly in books prepared especially for reading instruction, the actual level of reading difficulty of most school texts and references is unknown. Some science and social-studies books listed for the ninth and tenth grades, for instance, actually are more difficult to read and understand than certain others generally used at higher levels. This in itself is not necessarily bad, except that in the great majority of cases teachers have no way of knowing which are the most and which the least difficult books.

Not only is there a great lack of information on the difficulty level of most books used in classroom instruction, but also a great

dearth of knowledge of the pupil maturity level required to achieve success in various learning situations.

To test this thesis, one of the authors asked a college professor what per cent of his beginning freshman classes were able to gain an adequate understanding of the causes of seasons, tides, and similar natural phenomena. The answer was that very few were able to develop such understanding, that he had become quite discouraged even trying to teach them, and that he was considering eliminating serious consideration of this topic from the geography course. Next, a teacher of lower grade children was asked the same question. Her answer was that her children were always most highly interested in her unit on "The Earth and Sun" and that nearly all of her children could explain the factors causing changes in seasons by using the crude classroom apparatus which they had constructed to show movements of the planetary bodies.

Who was right? Possibly both; possibly neither. Possibly the methods used resulted in a better understanding of the interrelationships of our planetary system by the children than by the college students. More likely, neither instructor had experimentally determined the extent of conceptual learning under various teaching procedures and time allotments.

Some experimental studies have been carried out, particularly in the fields of arithmetic and reading, to determine optimal developmental levels for the teaching of particular skills and concepts. Still, little of a scientific nature is established regarding the relationship between a child's maturational level and his ability to achieve success in most learning situations, especially at the secondary level, where there is still too much teaching of conventional subjects with the "chips falling where they may."

The picture painted up to this point has been rather discouraging. While it is true that there can be no substitutes for needed scientific studies to determine the relationship between levels of maturity and ability successfully to achieve desired learnings, still every teacher can do a great deal to develop a wholesome learning environment in his classroom in spite of these limitations of knowl-

edge as to the difficulty levels of the materials being used and the learnings desired.

By the use of standardized intelligence, aptitude, and achievement measures, combined with cumulative records of past achievement, physical examinations, social histories, and teachers' judgments of abilities and personal characteristics, a teacher can obtain a fairly reliable indication of each pupil's intellectual, physical, social, and emotional levels and of special aptitudes and inaptitudes. Through the development of individualized progress techniques in those types of learning which are primarily individual in their nature—for instance, spelling, arithmetic processes, and the more mechanical aspects of reading and writing—and through a rich experience curriculum in learning situations primarily social in character, much can be accomplished in adjusting the curriculum to the learner in both elementary and secondary schools.

The unit-of-work approach to teaching, with its emphasis upon wide varieties of learning experiences and materials, makes it possible to adjust the work and materials of the unit to the special abilities of the various children, yet maintain the social aspects of the learning situation. The manner in which the work can be adjusted to individuals differing in their learning capabilities and interests was discussed and illustrated in Chap. VIII, in connection with a unit on "Power in our Present Civilization," and need not be repeated here. The illustration was concerned chiefly with showing how reading in science or a similar study could be organized so that it was in harmony with the principle of individual differences. It might well be enlarged upon to show how the wide use of visual and auditory aids and a considerably greater use of pupil demonstration and experimentation could be so planned that there was real challenge to the most capable members of the class, with opportunity to go way beyond the majority of the class in their studies on power, yet providing types of learning activities which would add considerably to the developing and expanding concepts of the pupils less capable in academic types of learning situations.

A factor which should always be kept in mind by the teacher at-

tempting to improve the effectiveness of the learning situation is the nature of conceptual learning. While it is probably true that with adequate drill certain skills can be mastered to an extent where further experience results in no further mastery of the process, such is not generally the case with conceptual learning. There are few concepts so simple that one cannot increase his degree of understanding by further and expanded experiences dealing with a given concept. On the other hand, there are very few concepts so difficult and so highly complex that even the student of lower ability cannot gain some degree of understanding at some time during his school life. Obviously, the problem of producing and using power can lead to the study of the most highly complex field of atomic research. But within the problem of power are much less complicated aspects, such as the principles of steam and gasoline power, the mechanism of the simple pulley, and the more effective utilization of our natural resources for producing power. Even in these latter problems one can progress from the very simple to the highly complex, so that all students can profit by certain phases of the unit, while there is ample to challenge the powers of the most capable.

In years past, efforts have been made to adjust the curriculum to the learner by so-called ability grouping. This practice, which at one time was quite prevalent, especially at the secondary level, is being discontinued rather rapidly. Among the more important reasons for such discontinuance are the following:

1. Segregation tends to label the academically bright as the "intellectuals" of the school and the less capable as the "dumbbells." This is a socially undesirable practice.

2. Segregation, in order to be effective, should imply differentiated curriculums fitted to the abilities and needs of the groups. In actual practice no such differentiation materialized, the classes of lesser ability merely going over the same materials as those of higher ability, but at a slower rate.

3. Actually, pupils do not fall into nicely segregated groups. Pupil *A* may well be in the upper group in his capabilities in foreign

language, the middle group in his ability in mathematics, and the lower group in music. Consequently, to be placed properly, each pupil must be classified separately in each of the several areas of the curriculum. Such a program becomes entirely too cumbersome to be administered.

4. The above are all contributing factors. The most important reason for discontinuing segregation, however, is the fact that teachers are rapidly learning to differentiate instruction within the group so that segregation by ability is neither necessary nor desirable in most instances. Exceptions to this general principle are to be noted in cases of pupils needing special remedial work, which may require temporary segregation for special instruction of a clinical type, and pupils who because of exceptionally low mental ability or serious physical defect, such as blindness, must have a specially devised curriculum possible only through segregation under expert instruction fitted to the character of the disability. As indicated above, through individualized instruction in those learnings which are matters of individual progress—for instance, spelling and the mechanics of writing, reading, and typing—and through some form of unit approach to teaching in science, social studies, literature, and other learnings chiefly social in character, the curriculum may be adjusted to the abilities of the various pupils of the class without segregation into "ability groups."

The reader should be careful *not* to jump to the conclusion that there should be *no* differentiated courses of instruction. Certainly learners of high capability in such specialized areas as music, art, and mechanics should have opportunity to progress far beyond the point considered essential to all. As one approaches the upper limits of the secondary school these differences in abilities and interests become so great that differentiated courses are both desirable and necessary. The extent to which such differentiation can be carried is limited chiefly by the size of the school and the initiative and foresight of the faculty. An illustration will make this principle clear.

School *A* is a four-year high school of between 700 and 800 stu-

dents and serves a small city and the surrounding communities. The faculty believes that all pupils in the school should have, among other things, not less than one year of music or art and three years of science. The student, however, may choose his music from among specialized classes in band, orchestra, and chorus, or he may take classes primarily developed to increase the novice's appreciations in these fields. In science all take the same courses for the freshman and sophomore years, but may select from four courses during the junior and senior years. The first two years are organized as a sequence of experience units of so-called "life science" containing materials cutting across all the specialized fields of science. For his third year, however, a student may continue with advanced units of the general science type, or he may enroll for a more specialized course in biology, physics, or chemistry.

In considering the above illustration, significant differences between this and "ability grouping" will be noted. In the first place, the curriculum itself is truly differentiated, so that the objectives, procedures, and materials of one course differ from those of the others. In the second place, the student himself, *under guidance of his teachers,* makes the decision as to which of the classes he will take in situations where he has such election. He may select a course in art or music designed primarily for one who will be a consumer only, or he may join the band, orchestra, or chorus, or take a course in art planned for pupils with a high degree of interest and technical skill. For the first two years all take the same science courses, with provision for individual differences being made within the classes themselves, but for his third year he may continue his work in general science or may select a course in physics or chemistry, but with the knowledge that it will become quite technical before the year is completed.

The question often is raised, "What about double promotions and failures?" It will be recognized that such procedures are not attempts at adjusting the curriculum to the child, but rather at adjusting the child to a set curriculum. Without getting deeply involved in such problems as grades, promotions, or effects of suc-

cess and failure, all of which are discussed at some length in other chapters, it may be stated as a general principle that neither practice is to be recommended except in the case of a child who is either too young or too old physically and socially for the group in which he is placed. It is often desirable to double-promote a child who is physically and socially considerably older than the other children of his class. A child, especially in the lower grades, who is physically and socially immature compared with his classmates might well be held in a grade for another year in order that he be among his equals.

It should be emphasized that the purpose of such actions is to aid the child in making satisfactory social adjustments, and that ability to do the work of a certain grade is of secondary importance. The above discussion, of course, is based on the assumption that the teachers of the school concerned are aware of their responsibilities in adjusting the curriculum to the child.

SELF-EVALUATION EXERCISE

Section I

Directions: The items below relate to the discussion of relating experiences to needs and abilities. Each item consists of a statement of a problem or a psychological fact requiring completion by the selection of one of the three possible phrases, clauses, or sentences listed as *a, b,* or *c.* Read each item carefully, then do the following:

1. Select the phrase, clause, or sentence which best completes the statement or which provides the best answer to the problem of the item concerned.
2. Write down the symbol of the "best answer" (*a, b,* or *c*) on a sheet of paper, together with your reasons for selection, for each item of the exercise. Tell why you believe the answer you selected to be better than the two you rejected.

The fact that one of the three possible answers to an item is considered to be the best answer does not mean that the other two

necessarily are wrong or false. Such may be the case; however, it may be that the "best answer" merely is more nearly complete than either of the other two, or that it is more in harmony with modern psychological thought. Remember, don't search for "right" and "wrong" answers or completions to an item, but, rather, for the *best* one of the three possible choices.

1. The most acceptable statement regarding the nature of individual differences is that—
   a. in any unselected group of elementary children or of high-school pupils the abilities will be quite homogeneous, so that special provisions for adjustment of the curriculum to the pupil need be made only in a few cases.
   b. differences are so great, not only in academic potential but in social, physical, and emotional development that an effective educational situation is possible only if very considerable adjustments are made in the curriculum.
   c. individuals do differ greatly, but can be divided conveniently into three groups: the superior, the average, and the below average, with all of each group following the same curriculum guides, but with definite differentiation between the groups.
2. Probably the most accurate statement relative to the recognition of the nature of individual differences and the implication for curriculum development is that—
   a. the nature of individual differences has been neither understood by educators nor recognized in classroom teaching practice.
   b. individual differences have been quite well understood by educators for a number of years and their implications recognized in terms of modified school practice.
   c. the nature of individual differences has been quite well understood by educators for a considerable number of years, but very few schools have modified their curriculums adequately to provide for such differences at all levels.
3. Of the following, the most acceptable statement regarding the

measurement of so-called general intelligence is that—

a. it can be measured directly by measuring the potential itself.

b. it cannot be measured directly, but must be measured by testing for the results of the potential.

c. at the present time it almost completely escapes measurement because of its highly indefinite nature.

4. General intelligence normally is considered to be—

a. an innate characteristic which cannot be affected to any material degree by environmental conditions.

b. a structural potential which, within limits, is modifiable by environmental conditions.

c. almost entirely a matter of environmental factors.

5. In general, a so-called intelligence test—

a. provides a valid and reliable measure of an individual's ability to make intelligent adjustment to life problems.

b. provides a fairly good measure of an individual's ability to succeed in rather highly academic areas of learning.

c. is too unreliable to be used as an indication of an individual's ability to learn in any of the numerous fields of human endeavor.

6. Miss Jordan teaches in the fifth grade of a city school. She desires to get a better indication of the special difficulties each of her children is encountering in the field of arithmetic. For this purpose she should use—

a. an intelligence test.

b. an achievement test.

c. a diagnostic test.

7. Miss Young is anxious to determine the level of reading development of her seventh-grade pupils in order to guide their study more intelligently. For this purpose the test she would find most helpful would be—

a. an adjustment inventory.

b. an achievement test.

c. a special aptitude test.

8. The test which would be most helpful in determining a child's ability to succeed in the more academic areas of the school would be—
   a. a special aptitude test.
   b. a diagnostic test.
   c. a general intelligence test.
9. Of those listed below, the best single indication of a pupil's ability to succeed in a given area of learning is—
   a. actual achievement in the area concerned, assuming adequate experience in that field.
   b. the results of a general intelligence test.
   c. the results of a special aptitude test in the field concerned.
10. Of the following, the most acceptable point of view regarding the use of so-called general intelligence tests is that—
   a. intelligence test results, when properly interpreted, do give an indication of a pupil's academic ability.
   b. intelligence tests are excellent measuring instruments for a pupil's ability to adjust himself in any situation of a problem-solving nature.
   c. intelligence tests are too unreliable to have any value in predicting a person's success in school.
11. The pupils of a junior high school have been segregated into ability groups of high, average, and low ability. Past grade averages, achievement test data, and intelligence test results have furnished the data upon which segregation has been made. From the point of view of modern educational thought:
   a. such practice is to be recommended.
   b. such practice is not to be recommended.
   c. whether or not this is good or poor practice is dependent upon the extent to which there are differentiated curriculums for the various groups.
12. Below are described three situations. The one which would seem to justify a double promotion is:
   a. George is well developed physically and is socially quite

mature for his age of eleven. His academic ability is somewhat below average. He started to school when he was nearly seven and has been failed once because of inability to meet the standards of promotion in reading and arithmetic when he was in the third grade. He is now starting the fourth grade and is considerably larger than the other children of the grade, but is nicely behaved.

b. Mary is just finishing the fourth grade. She is an exceptionally bright child in her studies, and her parents are anxious for her to forge ahead as rapidly as possible. She is small for her age, but fits well into the social group, although she excels all of them in academic accomplishments. She has been neither failed nor double-promoted while in school.

c. Alice is a year older than the average age of her fifth-grade classmates, but is small for her age and seems to fit well into the group. She does about average work. Alice started to school when she was seven, and her parents would like to see her double-promoted so she would be up with other children of her age.

Section II

Directions: The following items relate to relating experiences to needs and abilities. Some of the statements and described situations are in harmony with modern psychological thought; others are not. On a separate sheet of paper write the word "agree" if you believe the statement or the described situation to be in harmony with modern psychological thinking, or "disagree" if you believe otherwise, together with reasons for your agreement or disagreement.

1. In attempting to adjust the learning situations to the level of ability of the learner, the teacher today is quite handicapped, especially at the upper levels of the school system, by lack of experimental evidence of the difficulty levels of both the desired learnings and the materials available.

2. Most teachers today have an adequate understanding of procedures for adjusting the learning situations to the needs and abilities of the learners. The chief obstacles to achieving this goal are the lack of material and equipment and the attitude of the community toward change in the curriculum.
3. Achievement tests are very apt to be overly factual in the learnings they are devised to test; consequently, they often have acted to bolster up the conventional subject-matter-centered curriculum when used by central authorities as a measure of school success.
4. Social-adjustment inventories are valuable in guidance as they present highly reliable and valid evidence of the maladjustment of individual pupils.
5. Achievement tests in such fields as reading and spelling do furnish quite reliable and valid data on a pupil's actual achievement in these learning areas, assuming that they are correctly administered and intelligently interpreted.
6. Normally, a child whose reading is below the average of his grade should be held back at the end of the year and required to repeat the grade, as even in the up-to-date school he will be handicapped seriously if he is behind the group in his reading ability.
7. At the present time there is no known way of very adequately adjusting the curriculum to the child at any given grade level unless there can be segregation into ability groups so that each class will be fairly homogeneous in ability.
8. Intelligence tests, if properly interpreted, do give a fairly good indication of a pupil's ability to progress in the more academic areas of learning, but have little or no predictive value in such special areas as music, art, or physical dexterity.

SUGGESTED READINGS

Bingham, Walter Van Dyke: *Aptitudes and Aptitude Testing,* Harper & Brothers, New York, 1937.

Freeman, Frank N.: *Mental Tests,* rev. ed. Houghton Mifflin Company, Boston, 1939.

Gates, Arthur I., Arthur T. Jersild, T. R. McConnell, and Robert C. Challman: *Educational Psychology,* The Macmillan Company, New York, 1942. Chaps. II, III.

Greene, Edward B.: *Measurement of Human Behavior,* The Odyssey Press, Inc., New York, 1941.

National Society for the Study of Education: *Forty-third Yearbook,* Part I, "Adolescence," Public School Publishing Company, Bloomington, Ill., 1944. Chaps. I–VII.

Pressey, Sidney L., and J. Elliott Janney: *Casebook of Research in Educational Psychology,* Harper & Brothers, New York, 1937. Chaps. V, VI.

———: and Francis P. Robinson: *Psychology and the New Education,* rev. ed. Harper & Brothers, New York, 1944. Chaps. IV, X.

Remmers, H. H., and N. L. Gage: *Educational Measurement and Evaluation,* Harper & Brothers, New York, 1943.

Saucier, W. A.: *Theory and Practice in the Elementary School,* The Macmillan Company, New York, 1941. Chap. XV.

Skinner, Charles E., ed.: *Elementary Educational Psychology,* Prentice-Hall, Inc., New York, 1945. Chap. VII.

Sorenson, Herbert: *Psychology in Education,* McGraw-Hill Book Company, Inc., New York, 1940. Chap. IX.

Spencer, Douglas: *Fulcra of Conflict,* World Book Company, Yonkers, N.Y., 1939. Chaps. I–III.

Stoddard, George D.: *The Meaning of Intelligence,* The Macmillan Company, New York, 1943.

Wheeler, Raymond H., and Francis T. Perkins: *Principles of Mental Development,* The Thomas Y. Crowell Company, New York, 1932. Chaps. VII–X.

CHAPTER X

Motivation and Discipline

PROBLEMS

1. What are the respective parts played by drives and by motives in determining an individual's behavior? With which is education most concerned? Explain.

2. Explain "positive motivation" and "negative motivation" as determiners of an individual's behavior.

3. Compare and contrast the conventional and the modern school in their dependence upon internal and external motivation. Why must one, by its very nature, depend more upon extrinsic motivation than the other?

4. What are the conditions essential to intrinsic motivation in learning? From a psychological point of view, why is intrinsic motivation considered to be greatly superior to extrinsic motivation in the learning process?

5. What are the relationships between the type of motivation and the problem of discipline in the classroom? What are some guiding principles for a teacher to follow in group control?

6. To what extent is difficulty in learning a factor to be prized for its own sake in the school curriculum?

DISCUSSION

Motivation Required for Meaningful Behavior

In preceding chapters it has been stated that organic conditions provide the energy required for behavior. This energy is not specific, however, and can find an adequate outlet in a variety of activities. Through experiences with different reaction patterns, the individual discovers what to him constitute the most satisfying responses in a given situation, and these responses then become incorporated in his behavior pattern. It was pointed out in Chap. III that social and integrative needs are the motives that lead to any given reaction pattern, and that these motives grow directly out of the experiences of the individual. Adequate motivation in any learning situation, then, presupposes an understanding of the social and integrative needs of the learner and an understanding of the interrelationship of experiences and motives. What is an adequate motive for bringing about any given reaction pattern in an individual is determined largely by that individual's past experiences.

It should be remembered that some behavior does not require motivation since it involves reactions determined by structural or physiological peculiarities. Such behavior is aroused by organic disequilibrium and serves to relieve the disturbance in the most effective immediate way. The occurrence of the adequate stimulus is sufficient to initiate the specific response.

Meaningful behavior, involving as it does some measure of choice in regard to the specific reaction that will take place and its intended effect, is of a different nature. Here the adequate stimulus arouses the organic condition (or may consist of the organic condition or coincide with it) which provides the *dynamics* of activity, but the *form* which it will take is determined by factors not a part of the stimulating situation nor inherent in the organic

condition. As an illustration, let us assume that a piece of apple pie is set before a person. His reaction to this stimulus is by no means predictable from the situation thus stated. Either his organic condition is one of satiation or of partial depletion, but even then it is impossible to say specifically what reaction will occur. Assuming further that the pie intensifies his appetite so that he becomes keenly aware of its existence, he may still turn down the food because he feels that it is not polite to accept, because he is on a diet, or because he has reason to suspect that it has been poisoned. If he does decide to eat, there are various ways in which he may proceed. He may pick up the piece of pie with his hands, or use a fork, spoon, or knife; he may cut it up or tear it to pieces with his fingers; he may swallow it rapidly or taste it daintily; he may smack his lips or eat inaudibly—in fact, there is an almost unlimited variety of responses which may occur in this situation. The choices that are made depend on the dominating motives prevailing in the individual at that time, whether it be social approval, satisfaction of his hunger, hurry to get away, or whatsoever other consideration may be deemed most important. The energy liberated by organic conditions may be equally and adequately utilized regardless of the responses selected, and from that point of view none of the various possibilities deserves preference to any of the others so long as the basic need is satisfied. However, from the point of view of social needs, some of these responses are obviously unsatisfactory because they would involve social ostracism or other undesirable consequences, even though the basic organic need might be satisfied.

In a previous connection, prepotency of a motive has been identified as the factor determining the choice made among alternative modes of behavior. The problem of controlling behavior, therefore, is one of associating with the desired reaction pattern forms of motivation which will dominate over others and thus lead to the intended result. This motivation may be a part of the activity which in itself is satisfying, or may be attached to it in the individual's experience. In the latter case it may be diametrically op-

posed to the motive inherent in the reaction, as is true of table manners associated with the eating response. In polite society the social motive for behaving in an acceptable manner predominates over the organic urge of bolting one's food. In a sense, the satisfaction of this motive interferes with the immediate fulfillment of the basic drive. In other cases the acquired motive may serve to reinforce the more primitive satisfaction, as when a thirsty man drinks in company of friends rather than alone. In each of these cases the learned behavior provides an outlet for the energy supplied by organic disequilibrium, leading to meaningful, adjusted, motivated responses. The motive has served the purpose of utilizing basic energy to what appears at the moment to be to the individual's greatest advantage. But it is quite possible that the prevailing motive does not lead to behavior which, in the long run, serves best the person's needs. Hence the importance of establishing desirable motives which are consistent with ultimate goals.

Types of Motivation

From the examples given above it should be clear that motivation may be of a *positive* or *negative* type; either it directs behavior toward a desirable situation, or it steers it away from undesirable consequences.

When the individual has learned through experience that a particular response leads to a condition which he considers advantageous, that response is more likely to occur when another opportunity presents itself because it is now singled out from among alternative responses by having been associated with a satisfying experience. The anticipation of a repetition of this satisfaction enhances the energy liberated by the organic need, so that the behavior form in question is displayed more readily and carried out more smoothly. Positive motivation supplies the mild emotional state of pleasurable excitement which, as we have mentioned above, has a facilitating effect on behavior. Because other alternative responses are not associated with similar past ex-

periences, this particular one has the right of way and is preferred to those whose outcome involves unknown consequences. Of course, when more than one type of response has become connected with specific situations in the past, the strongest motive will prevail, unless the person is momentarily incapable of deciding between equivalent values.

Negative motivation operates in much the same manner. When past experience has convinced the individual that a given response leads to results which are not consistent with his best interests, he attempts in the future to avoid such situations. The choice of behavior in such a case is negatively determined by the unfavorable experience—that is to say, the energy released by the stimulating situation is steered toward some other possible response under the influence of the recalled effects of a previous response. If a raid on the cookie jar has resulted in painful punishment, the child will tend to be negatively motivated when the urge comes upon him the next time—providing, of course, that the satisfaction derived from the "undesirable" behavior is not so great as to outweigh the discomfort of the spanking.

The reason an individual's reaction to a situation cannot be predicted accurately in terms of past behavior is because different types of motives may prevail at various times. Perhaps he would get a higher mark in his courses if he went to school; but, when the fishing is good, the child may well decide that he would rather have a lower grade and a batch of fish than a higher grade and no fish. Probably he will be called into the principal's office for a lecture if he stays away from school to watch a circus parade, but watching the parade more than makes up for that, in the opinion of some children.

It becomes imperative, then, that teachers take into consideration the conflicting motives which operate in the child, as only by so doing can they expect to influence behavior along educationally desirable lines. Parents as well as teachers often fail to observe this principle, with the inevitable result that the motivation provided often fails to bring about the expected and desired behavior.

From an adult point of view the motives provided may seem preferable to others, yet to the child this may not be the case. Only by adequately understanding the motives that operate in the individual child can we hope to provide motives which will influence his behavior in a manner considered desirable, as such motives must be consistent with his dominant needs.

Discipline in the Conventional School

In the conventional school the curriculum is organized chiefly on the basis of logical coherence of subject matter. Consequently, it is not to be expected that self-motivating experiences would be present other than by chance. In the modern school, however, such experiences are provided by design, so that the problem of motivation ceases to be an extrinsic one and becomes an inseparable part of the curricular activities. The conventional school is forced to institute special measures whereby motives that are missing in the child's experiences with the subject matter are provided as appendages to the educative process. Such motives sometimes are positive, such as gold stars and high marks, but more often are negative, including demerits, staying after school, corporal punishment, low marks and many others. These negative motives, many of which actually are "disciplinary measures," are a necessary part of the older type of school system, but are mostly absent from the modern school as the effects of externally imposed discipline are believed to be undesirable for both the child and his teacher.

1. Effects of External Discipline on the Child

We have seen in a previous section that the experience of continuous failure is undesirable because it results in an antagonism to the learning situation which may well spread to other fields and to the educative process as a whole. Not recognizing this effect, schools of the older type impose punishment for failure by any of the various disciplinary devices designed for that purpose. The result is that the child not only feels inadequate because he

has been unable to achieve success in mastering the skill or other learning expected of him, but in addition becomes resentful against a system which exacts a penalty for this school-imposed condition rather than trying to remedy it. There are several ways open to the child in his attempt to adjust to this situation. He may strive to avoid these measures by putting forth his best efforts (which is the intended purpose of this type of discipline). Failing in this, he may accept the consequences and utilize them to gain the recognition that he is seeking, or he may adopt some form of rationalization to maintain his own self-respect. Now it is obvious that no amount of negative or positive motivation will enable a youngster to achieve a level of performance which is clearly beyond his capacity. However, in a required curriculum built to suit the abilities of the "average" child many pupils find themselves in such an impossible situation. Consequently, they often try to make the most of it by developing pride in incurring punishment, since pride in achievement is denied them under that system. Instead of serving the purpose for which it is intended, external discipline aggravates the condition of the failing child by intensifying his resentment against the school rather than aiding him to better adjustment.

Motivation of the conventional kind can be successful in achieving its avowed purpose only in the case of those children whose general capacity and special abilities enable them to achieve what is expected of them, but who lack adequate intrinsic, or internal, motivation to put forth the necessary effort. But the question should be raised as to whether "discipline" constitutes the most desirable type of motivation even for the group to which, conceivably, it could be successfully applied. It is most probable that the same effect could be achieved more economically and more beneficially by reorganizing curricular offerings in such a way that the experiences in which the pupils engage are in themselves stimulating enough to obviate the necessity of extraneous motivation. That such is the case is one of the basic convictions of the newer education.

2. *Effects of External Discipline on the Teacher*

The teacher in a conventional school has at his disposal an ingenious array of extraneous motivations upon which to draw in order to coerce or inveigle his pupils into making desirable responses. Convenient though this arrangement may be, it constitutes a real danger to the effectiveness of instruction. These wholly extraneous mechanisms are very apt to be called into play and the responsibility for the effectiveness of the learning situation shifted from the teacher to the pupil. As long as the curriculum is considered to be a comparatively static body of information to be divulged through the textbook and the instructor, considerable coercion apparently is necessary to force the class to absorb it. In such a setup there is little incentive for the teacher to go to the trouble necessary to teach in a manner calculated to stimulate pupil interest since he has the much simpler alternative of applying disciplinary measures to force compliance with his will and purposes.

Discipline of the conventional type permits the setting up of arbitrary standards of "right" and "wrong" behavior and of stereotyped response patterns to which the child can be forced to adhere or pay the penalty for nonconformity. Obviously, its wide acceptance is due to its simplicity of application. To the teacher it gives the entirely fallacious notion that there are certain ways in which each individual should react, that certain types of behavior are "right" or "wrong" per se. Actually, however, these are relative concepts. Behavior is adequate or inadequate *for somebody* and *under certain conditions.* Each response must be judged in the light of the responding organism, its needs and capacities, and the stimulating situation, before it can be qualitatively evaluated. But the temptation to establish definite rules of behavior and to enforce adherence to them is so great that many teachers are reluctant to surrender their time-honored authoritarian position for the much more exacting role assigned to them in modern education.

Self-discipline through Adequate Motivation

One of the fundamental tenets of modern education is that an adequately motivated child disciplines himself, and that need for extraneous forms of discipline is evidence of failure to provide the kind of motivation needed for adequate performance. Observation of pupil behavior in activities in which he is vitally interested offers convincing evidence that he does not hesitate to discipline himself, provided the reasons for doing so are clear to him. The individual who is interested in playing ball accepts without grumbling rules and regulations which serve to guarantee to all players equally fair opportunities to win, even though in a real sense they entail restrictions of his own freedom of behavior. The teen-age farmer boy whose father has given him a cow does not hesitate to get up at five o'clock on a cold winter morning to milk her; nor does his chum whose hobby is the collection of postage stamps consider it a hardship to restrain himself from buying candy and soft drinks in order to add to his growing collection. The child who lives near the ocean diligently learns the shape and name of each type of sailing vessel, and one who has access to an airport learns to recognize the different kinds of planes by the hum of their motors.

Such learnings are not only painless; they are effective to a much greater extent than those acquired under duress because these motives grow out of the child's interests, abilities, and needs. It is the conscious aim of education today to supply opportunities for experiences as truly representative of child needs as the examples given above. This aim is easily misunderstood. Some have charged that it implies allowing the child to do just what he wants to; others have claimed that it would make all schoolwork easy—"sugar-coated"; still others have maintained that the moral fiber of our youth must be built by making them undergo undesirable experiences.

We have said before that no sane educator would agree to letting children decide each day just what they wanted to do. Many

of the resulting experiences would not be educational in any sense of the word. It has been emphasized that, to be classified as truly educational, an experience must be based on previous learnings, fill a need which is experienced at the time, and lead to further growth by developing more advanced needs and interests. Obviously, such experiences cannot be left to the whims of the moment, but must be carefully guided by one who understands the nature and needs of both child and society.

Far from being a chaotic, unplanned conglomeration of chance activities, the modern curriculum is worked out in considerable detail and is based on the needs of both the child and society. It differs from the old in that it grows out of past activities of the children, is based on their present needs, and does lead to further interests and more complex experiencing; consequently it needs no extraneous forms of motivation. It is, in the truest sense of the word, a curriculum of self-motivating educational activities.

Children working under a modern program find themselves confronted continuously with problems which need to be solved, most of which require the concerted effort of the group. The answer is not always to be learned from a book, nor does the teacher necessarily have the answer; but under the guidance of the teacher the group works out its own solution by applying the combined judgment and energy of all its members. Only a person who has never thoughtfully observed the activities of a well-run modern school would venture the suggestion that schoolwork has become "soft." What *is* true is that the pupil does not object to putting forth extra effort, nor does he find the work distasteful, because he is vitally concerned with what is going on. In comparison with the simplicity of the traditional school, in which learning history, for instance, meant memorizing dates and events, the modern school demands far more from its pupils. Students are expected to grasp the significant distinguishing features of each epoch through investigating its genesis and tendency, its main currents of thought and action, and its relations to other periods. This includes studies of the art, manufacturing devices, transportation facilities, cloth-

ing, housing, and diet of that time, and results in a meaningful concept of the development of cultures rather than a superficial temporal orientation.

No evidence has ever been brought forth to prove that continuously undergoing unpleasant experiences under coercion is, in itself alone, good for one's character development. Yet every so often a critic accuses modern education of undermining youth's moral fiber—and this, by providing meaningful activities. The confusion apparently is due to an unthinking faith in the value of external discipline and to lack of familiarity with the effectiveness of self-discipline. Such an attitude denies the obvious fact that self-imposed restrictions and tasks are of a higher order than those imposed from without, at least as far as the quality of the person's character is concerned. If this were not true, what beautiful characters would emerge from concentration camps!

There are certain conditions that are essential to the development of self-discipline within a classroom. In the first place, activities must be developed in which all pupils can participate successfully and in which sustained interest can be aroused. Authority must be exercised in behalf of the interests of the group rather than as a personal force. The class is thought of as a social organization in which certain rules must be recognized for the protection of all. The teacher, because of his greater maturity, must and should be a positive force in the development of desirable behavior standards, but there must be general and voluntary acceptance by the pupils. To the extent that any necessary rules can be established by the pupils themselves through a democratic process, so much the better. A code of rules should be adopted only after open discussion of the rights and privileges of each pupil. The code then becomes a set of regulations applying to all alike and imposed on themselves by the members of the group. In order to avail themselves of rights and privileges in the school, they agree to submit to certain restrictions safeguarding the welfare of all. Disobedience of these rules becomes a violation of the rights of one's fellows rather than a protest against authority, and

the enforcement of these regulations becomes a point of honor for the group.

When all the pupils in the room take part in an activity, it is obvious, as has been indicated before, that not everyone can play a leading role. The solution in a democratic setup is to see that each pupil be given frequent opportunity to do so when his abilities are adequate to the task. It is the teacher's function to see to it that such opportunities present themselves to each pupil as frequently as possible, and that the activity at the same time provides suitable tasks for all members of the group. By so doing the class learns to accept the fact that leadership in activities involves a consideration of the rights of others and a subordination of one's own ambitions to the welfare of the community. Furthermore, each pupil experiences at first hand the pleasures and problems of playing a leading role and appreciates the necessity of relinquishing that part to others when the occasion seems to demand. Such restraint is accepted not as coercion imposed from above, but as an essential part of communal living. Extraneous discipline, which often is resented because of its apparent unreasonableness, is replaced by self-discipline, in which the individual agrees to certain limitations being placed upon his activities to promote the general welfare of the group.

The results in numerous schools of programs relying on self-discipline have demonstrated that behavior becomes more adequate than when superior authority constitutes the sole directing force. The reasons for this are obvious: (1) activities are adjusted to the needs and capacities of the pupil; (2) each individual has a share in the common enterprise; (3) each knows that only through cooperation with his classmates can the common objective be reached; (4) the common goal is at the time significant enough to provide the motivation needed to bring out the pupil's best effort; (5) the child makes an effort to do his own share of the work as his ability permits, rather than primarily striving to surpass others.

Under the above circumstances the pupil must drive himself toward achieving his own goal and restrain himself from interfer-

ing with the similar and correlated purposes of others. Discipline and motivation are so closely related to the child's own best interests that they no longer represent outside forces which he is at liberty to accept or reject. They are integral parts of his system of felt needs, and thus there can be no ignoring them.

Sociologists are agreed that, in general, laws constitute minimum standards of behavior acceptable to society, and that a person possessing a genuinely socialized attitude will adhere to a pattern of conduct well above this minimum level. Moreover, experience has taught us that, unless belief in the justness of a law is general, its enforcement becomes impossible, and that the resulting disrespect for an unenforceable law affects unfavorably the public's attitude toward other laws. Precisely this situation is found in the school. Rules and regulations which do not appear reasonable and just to the pupils generally are ignored, and the attempted coercion of pupils into obedience leads to their violation of other rules as well. If, however, these same pupils have cooperated in making the rules, or at least, if the reasons for their establishment and enforcement are understood and accepted by them, the desire to obtain recognition by disobeying an otherwise unpopular restriction disappears, and violation now becomes an infringement upon the recognized rights of the group.

Many schools, for instance, have rules against running in the corridors of the building. When the faculty is expected to enforce this rule, a rather fascinating challenge is presented to the children who are now tempted to run for no apparent reason other than that they are not supposed to. A very different situation prevails when the students are asked to help in determining the proper policy toward running in the halls, and when the enforcement of the resulting rules is placed in their hands.

Some teachers believe that a policy of self-government is inadvisable because the children do not understand the problems involved in making regulations concerning proper conduct. The answer is that no such difficulty has been experienced by schools which have seriously followed this plan. One might add also that

the only way in which individuals, young or old, will learn to make their own rules of conduct is to do so by actual experience. Much of the objection raised to delegating disciplinary authority in part or as a whole to the pupils is due to the fact that children's capacity for self-discipline is widely underestimated. Conventionally, children have been considered incapable of restraint and direction of their own activities, a conclusion which is accurate only so far as activities are concerned which are imposed upon them arbitrarily and which do not grow out of their needs. Furthermore, in the formal concept of discipline there is evidence of the antequated doctrine of original sin, which implied that, since children are innately wicked, it is necessary to impose on them benevolent discipline administered by adults. Though such concepts are seldom explicitly stated nowadays, the practices which they engendered persist in many ways.

Penologists and army officials have learned that self-discipline under guidance is far more effective in securing acceptable behavior than discipline maintained entirely by force of authority. Teachers as well as others rapidly are learning that, with an experience curriculum based on pupil needs and adjusted to the pupil's level of ability, there ceases to be any general "discipline" problem. Effectiveness of operation of the classroom and school, however, does require certain traffic and other regulations, but the students, under intelligent and constant guidance, can handle these problems most effectively.

In summary it can be said that in the modern school the problem of discipline becomes chiefly that of providing significant all-pupil activities. Rules are necessary for the protection and efficiency of the group, but, to be educational, must be cooperatively made and administered. Motivation is provided by judiciously selecting experiences in which the children are interested because they are consistent with their present needs, follow from their past experiences, and lead to objectives which they consider worth while. In contrast to the older schools, education now considers motivation and discipline integral parts of its curriculum plan-

ning rather than appendages extraneous to the real business of the school.

SELF-EVALUATION EXERCISE

Section I

Directions: The following items relate to motivation and discipline. Some of the statements and described situations are in harmony with modern psychological thought; others are not. On a separate sheet of paper write the word "agree" if you believe the statement or the described situation to be in harmony with modern psychological thinking, or "disagree" if you believe otherwise, together with reasons for your agreement or disagreement.

1. For all practical purposes in education "motives" and "drives" may be considered to be synonymous.
2. George enters school at the age of six years and two months. He is immature mentally, as judged by the results of an individual intelligence test, and is finding reading almost an impossibility. His teacher has struggled hard to teach him to read, but has about decided that he will have to repeat the first grade. In view of recognized principles of motivation, George most likely will try to avoid reading situations in the future.
3. In school either intrinsic or extrinsic motivation may be used to get a ninth-grade English class to accomplish its work. Neither is necessarily superior to the other; the real test is whether or not the teacher is successful in getting the work done when it is supposed to be done.
4. Jerry and Elizabeth are classmates in geometry. Jerry is much interested in mathematics and accomplishes the daily assignments willingly and with considerable ease. Elizabeth does not like geometry, but realizes that she must get a better than average grade in it as she wants to enter a rather exclusive women's college at the completion of high school. Consequently she works hard and usually has her assignments com-

pleted and correct. In either case the motivation is primarily intrinsic.

5. Energy for behavior comes from organic conditions; meaningful behavior is primarily determined by motivation. Such motivation is experiential in origin rather than organic.
6. George is faced with a situation where he must make up his mind whether he is going to turn out for football and give up his paper route or continue his paper route and not turn out for football. His ultimate decision will be determined by the potency of competing motives.
7. The chief function of a counselor of children is to guide them so that desirable motives will become preponderant over undesirable motives as determiners of behavior.
8. John and Gordon both are pupils in a seventh grade of a city junior high school. Both are considered to be superior students. At the first session of the art class each pupil is required to paint a picture of an autumn scene. At the completion of the period each is told to show his painting to the class. Gordon's picture draws exclamations of approval; John's picture draws a big laugh for its crudeness and a sarcastic comment from the teacher that she thought he was a good student, but that he will have to apply himself most diligently to art or he never can expect to get a passing grade. There is a very good chance that John will dislike art and will not take any more than he is required to take to get through school.
9. In general, satisfying experiences tend to become motivating forces, not only for further experiences in the same field of learning, but also in related fields. For instance, a boy who has become much interested in the study of economics is very apt to become interested in related social sciences.
10. If a person's background of experience is fairly well known it is possible by reason of this to predict quite accurately what his reaction will be in any given stimulating situation.

11. Miss Jones is teacher of a sixth grade in a town school. She has promised her pupils that if they reach a certain goal in the sale of Christmas seals they may have an afternoon party just before Christmas. It is psychologically correct to say that all the pupils have received the same motivation from the announcement.
12. A child who reacts to a stimulating situation in a given manner one day normally should be expected to react in a similar manner if the same externally stimulating situation occurred several days later.
13. Margaret and Joan each enrolled for American History primarily because it was required for graduation. Neither could see a good reason otherwise for taking it as each had studied the subject in the junior high school. Margaret soon became very much interested in their work, however, because the class studied and discussed vital issues of democratic living. Joan wasn't interested in political and economic problems of the type studied, but did reasonably good work as she needed the credit for graduation. It is correct to say that at the close of the year each was under extrinsic motivating forces.
14. Under a conventional subject-centered curriculum external motivation, both positive and negative in character, is an essential, as such a curriculum, by its very nature, does not grow out of the real needs of elementary- and secondary-school pupils.
15. A school curriculum developed to meet the needs of pupils, and within the level of insight of the learners, does not require extrinsic motivation as it is self-motivating.
16. A serious danger of using the promise of high grades and the threat of low grades as motivating forces is that this often is used to bolster up an inadequate curriculum and outmoded teaching procedures.
17. The threat of punishment in the form of low grades for failure to do assigned work may be justified on the established grounds

that a high percentage of pupils, especially at the secondary level, are just naturally lazy mentally and must be forced into mental tasks for their own good.

18. Extraneous motivation tends to shift responsibility for the learning situation from the teacher to the pupil, and for this reason cannot be defended as a common practice.
19. No child behavior can be considered either right or wrong per se, but must be considered in light of motivating circumstances and the experiential background of the child.
20. It is good for a child to have to do a considerable amount of disagreeable work as this is necessary to develop moral fiber and mental discipline. Children who go through school doing work only because they see it as "having purpose" are very apt to get mentally lazy and will lack self-discipline.
21. Normally there is no serious disciplinary problem in a room where the pupils are under good leadership and with a curriculum which to them is purposeful.

SUGGESTED READINGS

Anderson, H. H., and H. F. Brandt: "Study of Motivation Involving Self-announced Goals of Fifth Grade Children and the Concept of Level of Aspiration," *Journal of Social Psychology,* Vol. 10, pp. 209–232, May, 1939.

Betts, George H.: *Foundations of Character and Personality,* Bobbs-Merrill Company, Indianapolis, 1937. Chaps. VII, IX–XI.

Brooks, Fowler D., and Laurance F. Shaffer: *Child Psychology,* Houghton Mifflin Company, Boston, 1937. Chap. XII.

Caswell, Hollis L., and Doak S. Campbell: *Readings in Curriculum Development,* American Book Company, New York, 1937. Chaps. VIII, IX.

Dewey, John: *Interest and Effort in Education,* Houghton Mifflin Company, Boston, 1913.

Dewey, John: *Experience and Education,* The Macmillan Company, New York, 1938. Chaps. VI, VIII.

Frank, J. D.: "Recent Studies of the Level of Aspiration," *Psychological Bulletin,* Vol. 38, pp. 218–226, April, 1941.

Hockett, John A., and E. W. Jacobson: *Modern Practices in the Elementary School,* Ginn & Company, Boston, 1943. Chap. VII.

Hurlock, E. B.: "The Psychology of Incentives," *Journal of Social Psychology,* Vol. 2, August, 1931.

Lee, J. Murray, and Dorris May Lee: *The Child and His Curriculum,* D. Appleton-Century Company, Inc., New York, 1940. Chaps. IV, V.

Lewin, Kurt: *A Dynamic Theory of Personality,* McGraw-Hill Book Company, Inc., New York, 1935. Chap. IV.

Mowrer, O. H.: "Preparatory Set—(Expectancy)—A Determinant in Motivation and Learning," *Psychology Review,* Vol. 45, pp. 62–91, January, 1938.

Murphy, Lois B., and Henry Ladd: *Emotional Factors in Learning,* Columbia University Press, New York, 1944. Pp. 34–75.

Mursell, James L.: *The Psychology of Secondary-school Teaching,* W. W. Norton & Company, New York, 1939. Chaps. XV, XVI.

National Society for the Study of Education: *Forty-first Yearbook,* Part II, "The Psychology of Learning," Public School Publishing Company, Bloomington, Ill., 1942. Chap. VIII.

Prescott, Daniel A.: *Emotion and the Educative Process,* American Council on Education, Washington, 1938. Chap. VIII.

Pressey, Sidney L., and J. Elliott Janney: *Casebook of Research in Educational Psychology,* Harper & Brothers, New York, 1937. Chap. III.

———: and Francis P. Robinson: *Psychology and the New Education,* Harper & Brothers, New York, 1944. Chaps. V, XII.

Seward, G. H., and J. P. Seward: "Internal and External Determinants of Drives," *Psychology Review,* Vol. 44, pp. 349–363, July, 1937.

Talman, E. C.: *Purposive Behavior in Animals and Men,* D. Appleton-Century Company, Inc., New York, 1932.

Wheeler, Raymond H., and Francis T. Perkins: *Principles of Mental Development,* The Thomas Y. Crowell Company, New York, 1932. Chaps. XIII, XIV, XXII, XXIII.

Woodruff, Asahel D.: *The Psychology of Teaching,* Longmans, Green & Co. Inc., New York, 1946. Chap. IV–VII.

Young, P. T.: *Motivation of Behavior,* John Wiley & Sons, Inc., New York, 1936.

Zubin, J.: *Some Effects of Incentives: A Study of Individual Differences in Rivalry,* Teachers College Contribution to Education, No. 532, Teachers College, Columbia University, New York, 1932.

CHAPTER XI

Criteria of Success

PROBLEMS

1. From a psychological point of view, what constitutes "success" or "failure"? Does nonpromotion or a failing grade really mean failure to the child? Explain.
2. What are the essential elements of a good evaluation program in the school? What is the relationship of measurement to evaluation?
3. Why must any complete evaluation program be considered as part of a total program of curriculum improvement? In particular, consider the relationship of evaluation to a clarification of the aims of education.
4. From a psychological point of view, what are the objections to the conventional grading system? From an evaluation standpoint, what are its weaknesses?
5. Considered as an evaluation instrument, what are the objections to a form of report which marks only as "satisfactory" or "unsatisfactory" in the several learning areas?
6. Why are cumulative records so essential in any program of evaluation?

DISCUSSION

Success and Failure

As in the case with so many terms used in discussions of the educative process, "success" and "failure" have various meanings and often are used very loosely by teachers, pupils, and parents. In speaking of the same situation, a parent may say, "Peggy failed in school this year and will have to repeat the second grade," while the teacher may say, "Peggy is younger than most of the children of her group and is rather immature socially as well as mentally. While she has made as much progress as could be expected, she still is unable to read second-grade books. We decided that she would be much happier in a younger group, and would be more successful in her future schoolwork if she were retained in the second grade."

Did Peggy fail? Her mother probably would say "Yes." Her teacher most likely would say "No." Actually the question cannot be answered with an unqualified "Yes" or "No." The mother was speaking in terms of an arbitrary goal which convention had set up, namely, promotion. In common usage of the term, the school had "failed" Peggy. Whether or not Peggy herself felt a sense of failure would be determined by several factors, chief of which would be the extent to which promotion to the third grade was conceived by her as the goal toward which her year of school work had been directed. Under guidance of a teacher primarily concerned with leading Peggy into experiences that would result in all-round growth—physical, social, and emotional as well as intellectual—and with understanding parents, Peggy probably would not seriously feel that she was a failure. If, however, promotion was emphasized by teacher, parents, and the children to such an extent that there was a real stigma attached to nonpromotion, then Peggy would be likely to have set this as her purpose and would then have experienced failure, even in spite of the fact that, in re-

lation to her potentiality, she had made very satisfactory progress.

From a psychological point of view, success is the achievement by an individual of a goal which he, himself, has conceived, or at least accepted, as something which he is desirous of attaining. Failure, that is, lack of success, results only when the individual has made serious efforts to attain such a goal, but has been frustrated in the attempt. Consequently the determination of whether an individual has been successful or has failed is possible only as performance is judged in the light of the goals which the person has set or definitely accepted for himself.

It should be obvious, then, that passing and failing marks in school are no criteria of real success or failure of an individual. Actually they are indexes of the school's judgment of pupil accomplishment in certain learning areas. Whether or not they represent success or failure must be judged by the extent to which the pupil's attention has become focused on the mark or grade as the chief end toward which he has directed his efforts. If, for instance, Peggy's aim in her reading activities is to learn to read so as to utilize reading to find out things she wants to know and be able to read for pleasure, the particular mark she gets in reading is incidental. What *is* important to her is that she is making progress and that she can now read books which she could not read last year. If, however, the threat of failure to be promoted is used as a coercive force in Peggy's school or home situation, and getting low grades creates a very unpleasant condition at home, Peggy may be forced by circumstances to think of reading as a means to an end—that of getting as high a grade as possible in order to avoid an unpleasant scene, or to win the plaudits of her teacher and parents. In the latter situation, Peggy might well be successful in learning to read, but still be labeled a failure, both by the school and herself, because she had failed to attain her desired goal—a mark in reading that was satisfactory to her mother.

Evaluation

One of the most wholesome trends in education is the movement

away from conventional marks or grades as the basis for judging a pupil's accomplishment, and toward an evaluation of pupil behavior in terms of his growth along those desired lines that are termed the aims of education. The modern school is not so much concerned with passing judgment on a pupil's achievement and conduct as it is in measuring and evaluating his growth in the development of desirable behavior patterns.

Evaluation is more than measurement, although the utilization of measurement is an important part of the evaluative process. Educators speak of evaluating the building program, the curriculum, the administrative function, and pupil growth. In a psychological discussion our concern is with the evaluation of pupil growth and development, encompassing both the school's evaluation of the pupil and the pupil's evaluation of his own behavior and growth. In this evaluation the school and pupil attempt to judge the worthwhileness of the learning activities in terms of actual progress in the attainment of the specific aims of education. It implies the clarification of these aims in terms of desired behavior, the application of objective and subjective measures, the interpretation of the results of measurement and observation, and an arrival at conclusions concerning the adequacy of the resultant development of the pupil. Obviously pupil evaluation cannot be separated from a consideration of the total learning situation in which the growth takes place, but it is possible to think of pupil evaluation and curriculum evaluation as two aspects of the same problem.

A detailed consideration or evaluation of the learning process is outside the scope of this book and would require several chapters for anything more than the most cursory treatment. Consequently no attempt will be made to lay out an adequate program for evaluation; rather, the discussion will be held to a general critique of present practice, desirable and undesirable, and to the presentation of general principles basic to an adequate evaluation procedure.

Competitive Grading Systems

The conventional grading or marking system still prevalent in most colleges and secondary schools and found in all too many elementary schools is based upon competition among individuals for marks in a more or less standardized body of subject matter and learning skills. The usual plan of evaluation, based on the assignment of a specific mark, either on a percentage basis or on the familiar five-point scale in which symbols are used to indicate "very superior," "superior," "average," "inferior," and "very inferior," falls far short of being an adequate evaluation program. Its use is still so general, however, that it deserves consideration in any discussion of criteria of success and failure. There are many variations of grading but the following procedures are widely used.

1. Absolute Standards of Achievement

In an attempt to arrive at criteria of success, certain more or less arbitrary standards are set up for a given subject which students must attain in order to receive specific marks for the course. In some instances, specified percentages are considered the equivalent of certain marks—below 70 rates an F, 70–78 rates a grade of D, 79–85 rates a grade of C, 86–92 a grade of B, and above 92, a grade of A. In some instances the same tests are administered to consecutive classes and rough standards set up which must be attained for specific grades. In other cases the grade merely represents what the teacher thinks the pupil knows about the course and is entirely subjective in nature.

An illustration of the absolute-standard procedure in grading will help to clarify the discussion. A particular junior high school has constructed an objective test of 100 items on the Constitution of the United States. At the close of the period of instruction this test is administered and scored. All those who get scores below 75 are failed and have to do outside study and take a make-up ex-

amination. Other grades are assessed on a percentage scheme similar to the illustration above.

2. *Relative Standards of Achievement*

As a result of the great emphasis on standardized testing and objective measurement following World War I, there was a considerable shift to what often has been called "grading on the normal curve" as a means of improving the grading system. This system, with which most college students are familiar, consists of assigning grades on the basis of a pupil's relative rank in the class. Some of the statistical processes utilized in this procedure are entirely too complicated for presentation to students with no statistical training, but the general characteristics can be presented rather simply. Basically, it consists of scoring the examination papers, listing the scores from low to high, and then applying a percentage scale to the distribution. For instance, the distribution may be divided into 10 equal parts, with the highest 10 per cent of the papers graded A, the next 20 per cent graded B, the middle 40 per cent C, the next 20 per cent D, and the lowest 10 per cent graded F, or failed. Sometimes a quartile distribution is made, with the highest 25 per cent graded A and B, the middle 50 per cent C, and the lowest 25 per cent D and F, usually on a 5, 20, 50, 20, 5 basis.

In its more technical forms and in the hands of instructors with statistical training, grades are determined by deviations from the average through application of formulas for determining such deviations. Different formulas are in use for finding each of the following: "average deviation," "standard deviation," and "quartile deviation."

In general, a teacher grading on the relative standard of achievement basis assumes that the abilities of the group approximate a normal distribution from the very inferior to the very superior, so that the class represents a typical cross section of the population, an assumption that is very dubious in groups the size of the average secondary and elementary class.

3. Contract Plan of Grading

This procedure varies from school to school, but is based on the assumption that a person getting higher grades should do more work than the person getting lower grades. It is an attempt to overcome one of the chief criticisms of competitive grading: that the more capable students often get the high grades with considerably less effort than is required of a low-ability student to get a low-bracket grade. Under the operation of this plan certain minimum essentials are set up which, if met, entitle the student to a grade of D. If a student wishes a higher grade, he must do additional work of an acceptable quality. In some cases he actually signs a contract in which he agrees to accomplish certain specified work in return for a given grade.

4. Comparing Actual with Potential Achievement

A fourth plan of grading used in some cities is based on a comparison of the pupil's actual achievement with his potential for achievement. By the use of intelligence tests and, in some cases, other data such as special aptitude tests and teacher judgments, pupils are listed as of A, B, C, D, or F potentiality. Subject marks are first determined by the method of 1 or 2 above, then compared with his potential grade. If, for instance, his actual competitive grade is C but his potential grade B, the pupil is assigned a report-card grade of D on the assumption that he has not worked up to his ability. If, on the other hand, his actual competitive grade was B and his potential C, he would be assigned a report-card grade of A on the very debatable assumption that he had exceeded his ability.

Defects of Competitive Grading as a Criterion of Success

Rather than attempt to discuss the values and defects of each of the various methods of marking, it seems much more to the point to consider criticisms of the system as a whole and to suggest cer-

tain principles that should form the basis of an effective evaluation program. While not specific in the consideration of the grading system as such, the discussions under Chaps. V and X are very pertinent to the point at issue.

From a psychological point of view, the conventional grading system is objectionable for the following reasons:

1. Grades or marks are inadequate indications of all-round pupil progress. For a number of years there has been a rapidly increasing realization that the conventional marking system did not present an adequate picture of the characteristics and modifications of pupil behavior, and that some change was in order. For instance, what does a grade of B in sixth-grade arithmetic mean in terms of Evelyn's actual development of mathematical concepts and abilities? What does it tell us about her understanding of fractions or problems of measurement? The answer is, nothing. All that it means is that Evelyn is doing superior work in arithmetic, in the judgment of the teacher, which is based on a combination of certain known and unknown factors. Assume that, as is often the case, for the next six weeks Evelyn's grade drops from B to C; does it mean that for some unexplainable reason Evelyn's actual mathematical capabilities have suddenly decreased from superior to average? Or does it mean any one of a dozen other things—that she failed to get in certain assignments; that her final examination score dropped from the top quartile to the second from the top; that the teacher had decided to crack down a bit on his grading as a stimulus to harder work; or that Evelyn had become increasingly interested in making First Class in her Girl Scout work, with some neglect of her arithmetic? It might even mean that Evelyn had been naughty in her arithmetic class and was being punished by having her grade cut.

If one asks, "What does a change in grade from a D to a C mean in health or in citizenship?" the answer can only be, "Ask the teacher." Is a D child less healthy than a C child, or is he just unable to read and understand the text on health? If a child drops from A to C in citizenship, is he on his way to delinquency

or did he happen to get caught throwing a piece of chalk at a boy across the room?

Obviously, a grade of A, B, C, D, or F means very little unless accompanied by a carefully written explanation of why the pupil was given the particular grade, in which case it is the note that is really the evaluation, and the grade becomes superfluous.

2. Grading, when based on competitive achievement, often becomes harmful in its psychological effect upon both high- and low-ability students. It is often argued that grading can be made objective in nature and relatively scientific by objective and semi-objective measurement of actual achievement in each of the several subject areas of the curriculum, combined with the application of statistical treatment by which grades are assigned on the basis of deviations from the class average or median. Of this contention there is little doubt; it can be done, although the data on which most teacher-made tests are constructed still are subjective in their selection.

However, we are concerned here not with whether or not grades can be determined scientifically, but, rather, with the psychological effect of their application to pupils. If serious injury is done to a considerable number of children, the fact that it is done scientifically is very poor justification indeed.

The psychological effects of failure were discussed at considerable length in Chap. V and the application here is very pertinent, so that extended discussion of this point is not believed to be necessary. The chief criticism here is the plain fact that the child with superior endowment and with fortunate home environment can and does win the high marks with effort no greater than it takes for many in the same class barely to avoid failing grades. Under competitive marking, many are predestined to failure regardless of their effort because they just aren't cut out for academic success under a highly competitive marking system. Entirely too many pupils with high academic potential fail to develop the ability to achieve up to their capacity because they seldom have had to get down to really hard study for extended periods in the

elementary and secondary schools. Many of these students flunk out of college during their freshman year when forced to compete with their intellectual peers because they have not learned how to study intensively and effectively.

On the other hand, our secondary schools now contain large numbers of below-average, discouraged, and often rebellious youngsters who have become that way chiefly because of being forced into situations where, regardless of their efforts, they were doomed to low and frequently failing grades.

The questions are often asked, "Shouldn't students of low academic ability learn that their abilities in certain fields are limited? Would you let them go through school thinking they are capable students in mathematics and science, for instance, when the opposite is the case?"

The answer to such questions is an emphatic "No," but there are ways to ensure that a student does develop a realistic understanding of his own abilities through recommended evaluation and guidance procedures without making him discouraged and bitter.

3. Under a system putting emphasis upon getting high marks, these marks rather than the studies themselves tend to become the goals of the pupils. Entirely too many students are studying algebra or English in order to get the credits and high enough marks to get into college or to "keep the Old Man happy"; too few are studying hard in these subjects primarily because they see them as learning activities of present or potential value to themselves. It is an accepted psychological principle that extraneous motivation is inferior to inner or intrinsic motivation, yet the conventional grading system perpetuates and encourages this inferior type of motivation.

Suggest to a college faculty that the grading system be abolished and there is a loud and immediate cry that students would not study if it were not for the combined reward and threat of high and low grades. If true, this is a sad reflection upon the results of the grading system, because it is a certainty that primary children under a modern curriculum need neither the reward of high grades

nor the threat of low grades to make them work. They are interested in what they are doing because the work itself is purposeful. One of three things happens between the primary grades and the high school and college, if we accept the premise that grades are essential at the higher levels to provide incentives to work: (1) the pupil has ceased to be curious about the world in which he lives and so must be motivated externally to prevent complete stagnation, (2) he has become so habituated to working for credits and grades that these have become the chief ends of education for him, and (3) the curriculum—elementary, secondary, and college—is so far removed from his world of interests, or is so dull in its presentation, that a system of rewards and punishments is necessary to make him do the work.

If (1) is correct, the grading system could be justified, but all psychological and social evidence is to the contrary. If (1) above is not true, and if one takes the position that a grading system is necessary, it becomes a sad commentary on our present system of education, because either (2) or (3) or both then are assumed or implied to be true.

4. The grading system bolsters up poor teaching and an inadequate curriculum. This point already has been discussed at some length in Chap. X and in the above paragraph and needs little elaboration here. Suffice it to say that poor teachers could not teach without being bolstered up by authority and the coercion of the grading system. Likewise, a formal curriculum, far removed from the needs and interests of the great majority of the students, would fall of its own weight. Coercion and the promise of rewards admittedly can keep a class together and working, but at a very low point of efficiency if real interest in the task at hand is lacking. Given intrinsic interest in the learning situation itself, neither coercion nor marks are necessary.

5. Competitive grading gets in the way of effective teaching under a modern curriculum. The classroom emphasis in education today at both the elementary and secondary levels is on cooperative rather than competitive enterprise. Pupils work to-

gether as committees or teams on the accomplishment of large units of work. The learning activities are much more varied, and the aims of teaching in any given subject or field are much broader, than the mere mastery of subject matter. The nature of the grading system, however, is competitive and therefore out of harmony with a modern classroom situation.

For instance, in the development of a junior-high-school social studies unit on "Resources and Industries of the Southwest," one group of seven pupils may be making an intensive study of the petroleum industry and may be preparing a series of charts and models to use in making a presentation to the whole class. Possibly three or more weeks will be consumed in the planning, research, and construction activities, which may culminate in a two-hour presentation to the class. Evaluation should be in terms of progress in achieving the aims of the unit, among which are increased ability to plan, to do effective research, to organize and present ideas well, to understand the importance of the oil industry in our economy, to gain increased technical knowledge, to learn how to work together toward group objectives—these and many others being the aims toward which the teacher is guiding the class. No system of competitive marking is adequate to evaluate this growth. Evaluation is possible, but the necessity of assigning grades becomes a barrier to effective cooperative endeavor and is a time-consuming, exasperating procedure which accomplishes no useful end and creates definite difficulties.

6. The competitive grading system tends to develop dishonesty. Whether or not this happens is determined chiefly by the amount of pressure put upon the student to get high grades. The findings of attitude surveys on cheating in college present very startling evidence on the prevalence of cheating among capable students as well as among the less capable. What is worse is the fact that most students who cheat feel that it is a justifiable means to an end, that of getting good grades. This attitude is based on two factors; either the student believes that so many others cheat that he

is forced to do likewise as a matter of self-preservation, or he believes the examination system unfair, consequently unfair means are justifiable to beat the system. One might contend that the competitive system also could be used to establish honesty of behavior rather than dishonesty, and it is entirely possible that this could be accomplished under very carefully planned and controlled conditions, but as a generalization it is belied by the dismal failure of the so-called "honor system" in colleges and universities.

If the grading system were essential to the achievement of the aims of education, the argument of dishonesty-breeding would not be very strong. One can as well argue that speed laws make lawbreakers; therefore do away with speed laws. The answer, of course, is that there are more effective ways of evaluating progress without the "dishonesty" effects of the competitive system of marking; consequently this criticism is a factor to be considered.

7. Competitive grading tends to set up barriers between teachers and pupils and between teachers and parents. This is apt to occur primarily in situations where grades are failing or near failing. Discussions of achievement under these conditions in all too many cases become discussions of why the child was given a low grade. Too often the teacher finds himself explaining and defending the grade rather than engaging the parents in a mutual consideration of the child's abilities and needs and what, if anything, can be done to improve the learning situation of the pupil. It tends to place the teacher in the position of judge rather than counselor, and creates a spirit of opposition in both parent and pupil which first must be overcome before full cooperative effort is possible.

Characteristics of an Adequate Evaluation Program

As suggested above, a detailed presentation of an evaluation program would require a book in itself. Consequently this discussion is confined to a consideration of general principles basic to an adequate program of evaluation in the public schools.

1. *A Clear Concept of the Aims of Education Is Basic to Evaluation*

What are the specific behavior and growth patterns thought to be desirable and for which the school has accepted some measure of responsibility? Are these responsibilities primarily confined to the development of certain skills and the mastery of the subject matter of the courses of study, or is the school concerned with the all-round growth and development of each individual under its care and guidance?

The answer of modern educators is that the school is and must be concerned with all the growth and behavior patterns essential to the performance of the basic functions of living and to meeting the needs of the individual and society in a democratic and highly dynamic social order. This does not mean that other agencies of the community become less responsible for the education of the child, but it is a recognition of the fact that the school must be the coordinating agency in the education of youth and cannot remain unconcerned where the welfare of a pupil is at stake.

Whether or not one accepts this point of view, however, is immaterial so far as the operation of the above principle is concerned. What *is* important is that teachers and administrators know specifically what growths they are attempting to bring about in order that measurement, interpretation, reporting, and planning may be based on *all* these aims and not alone upon those most easily measured, as is still the case in all too many instances. It is relatively easy to administer standardized arithmetic, spelling, and reading tests and to keep a record of the comparative growth of each pupil over a period of years. It is equally easy to measure and record weight and height changes. It is much more difficult to measure, interpret, and record growth in such complex forms of behavior as the ability to plan and work with others in a cooperative manner, the ability to appreciate the beautiful in art and literature, the increase in understanding of the more complex social and economic concepts, and the wholesomeness of a pupil's attitudes in

relations with the opposite sex. Yet these latter are of no less importance because of their intangible nature.

2. An Evaluation Program Must Be All-inclusive in Scope

This principle is an extension of the preceding one and needs little further elaboration. The program must be organized and developed to evaluate growth in all those understandings, attitudes, appreciations, and essential abilities which are incorporated in a comprehensive statement of the aims of education. It must be as much concerned with the integration of character and personality traits as it is with the so-called three R's; as much with the development of creative expression as with an appreciation of the old masters; as much with mental health as with physical health.

3. An Evaluation Program Must Be Adjusted to the Needs and Abilities of the Individual

While measurement must be comparative to have meaning, the interpretation of any discernible growth or modification of behavior must be in terms of the individual, his environment, needs, and capacities. Six months' measured growth in reading after a nine-month period of instruction might well be a cause for rejoicing with a pupil of low academic ability, poor home environment, or both; but the same progress might be a matter of grave concern to another member of the same class with known high academic ability. For Wilbur, coming as he does from a broken and poverty-stricken home, to go through the school year with only three truancies might be a tremendous improvement over last year and a cause for commendation, while the same record for George might be an indication of developing delinquency.

The same principle applies to the comparison of groups. Actually an average growth of fourteen months in spelling or reading ability after a year's instruction in a third grade of a school in one of the better residential districts of a large city might be less significant than a measured average growth of eight months in the same grade of a school in the foreign section of the city.

This discussion could be continued indefinitely with illustrations similar to the above and including the whole realm of human behavior. The principle would seem obvious, but unfortunately is violated frequently. Some cities still publish achievement-test averages for all of their schools; many universities publish the average entrance-examination standings of all high schools of the state; and teachers still worry about an excessive number of students of lower ability in their rooms who are going to pull down the class averages on the spring achievement examinations.

4. Self-evaluation Is an Essential Part of the Evaluation Process

Evaluation is conceived to be an integral part of an effective learning situation for both the individual and the group. The wise teacher is continuously stimulating pupils individually and as a group to reexamine their goals and to evaluate the effectiveness of the learning situation in facilitating achievement of these goals. Each child is encouraged to set goals for himself, to check his progress toward those goals, and to modify his own learning activities in the light of measures of progress and his and the school's interpretation of these measures. The learning situation in the school, both inside and outside the classroom, becomes a process of setting up aims to be achieved, of planning ways and means of achieving the desired ends, of initiating and carrying on various learning activities, of evaluating the effectiveness of these activities in light of the set goals, and of reexamining both the goals and the learning activities as the work progresses.

Many of the goals are group goals, such as the building of a replica of the Grand Coulee Basin project by a committee of a ninth-grade social-studies class, or the painting of a mural by a fifth-grade class to depict education in Colonial America. Other goals are individual in nature: for instance, learning to write legibly, to spell correctly, and to keep well physically and mentally. While much of the instruction of the latter type may be in groups, the goals need to become individualized and each child interested in evaluating his own progress and his learning activities.

5. The Evaluation Program Must Stimulate Self-motivation

As discussed above, one of the chief criticisms of the conventional grading system is that marks or grades rather than the learnings of the subject area itself tend to become the goals toward which the pupils work. Consequently some means of reporting progress must be developed which measures and interprets actual growth in the development of specific behavior patterns. Consider the following illustration: a class and a teacher are engaged in a study of United States history because such activity leads to certain basic concepts of our society,—understandings essential to effective citizenship. It means that pupils must know what these understandings are, and that an evaluation must be made of their growth in these specific generalizations. The competitive grading system not only fails to contribute to the application of this principle, but actually increases the difficulty of achieving it by diverting the pupil's attention to extraneous goals.

6. Adequate Evaluation Should Lead to an Improvement of the Learning Situation

Measurement, which is one of the essential elements of the evaluation process, yields data on the status of achievement, ability, or whatever is being measured. When compared with past measurements of the same factors, it becomes an indication of the growth of the individual, assuming the validity and reliability of the measuring instruments. This in itself is important information to one charged with the responsibility of guiding the learning activities of the persons concerned. At least it presents a picture of what is happening under the present curriculum and has predictive value for future achievement. It also provides data for helping the student understand his own capabilities and for reporting to parents.

If, however, the evaluation process stops at this point, its full potentialities for the improvement of instruction have not been realized. Educators must be concerned not only with what the

pupil has learned, but with the continuous improvement of the learning situation. Measurement, if used properly, indicates the progress made toward the attainment of goals, but it does not point out the *causes* of unsatisfactory progress. This becomes a matter of interpretation, of evaluating various learning activities.

An illustration will make this point clear. Mr. Blackstone teaches socioeconomic problems in a medium-sized high school. At the beginning and at the end of a unit on "Our Changing Agricultural Economy" he administers an objective test. This test is so planned that it is diagnostic in nature. One section is an attitude scale devised as an inventory of the attitudes of the pupils on such questions as the following:

Should farm prices be controlled by the government?
Should farm labor be organized?
Should child-labor laws apply to agriculture?
Should farm cooperatives be encouraged?

Another section is a test of general and specific facts essential to an understanding of major farm problems. A third section consists of a series of problems necessitating the application of certain economic principles to arrive at the correct solutions—problems of changing values of agricultural products, of the effect of economic depression on the farmer, and of similar concepts lending themselves to a problem treatment. A fourth section contains a number of statements of fact and of principle to each of which the student has to react in terms of "true," "false," "not sure," then write his reason for his answer.

Immediately upon administering and scoring the preliminary tests, Mr. Blackstone tabulates the answers to each item and compares the results with preliminary and final test results of preceding classes. He also notes answers indicating a considerable degree of understanding or lack of understanding of specific problems and plans modifications of his teaching procedures accordingly. At the completion of a unit he notes especially the points at which understandings seem inadequate and plans modifications here and there to improve the situation for future classes—

securing more visual materials, perhaps, to illustrate the effects of changing monetary values on agricultural prosperity; increasing time from one to two hours for the county agriculture agent to discuss farm cooperatives; or increasing the total time allotted to the unit by a week.

This, one might say, is curriculum improvement rather than evaluation. True, but evaluation is as much an integral part of curriculum development as it is of improving a particular child's ability to read.

7. *The Reporting and Interpreting of Pupil Growth to Parents Is an Essential of Evaluation*

In very few school systems where there is a serious study of the problem of reporting to parents and interpreting pupil growth to them are the staffs satisfied with their present practices, and considerable experimentation is under way. Some practices, however, do stand out as definite improvements over the conventional system and will be discussed briefly.

a. The informal letter is being utilized by a number of systems. Whether or not this procedure is successful is determined by the care with which each letter is written. A short note which deals only in vague generalities and which does not become specific in those matters of growth in which the child's parents are particularly interested, is of little value and unacceptable to parents who really want to know how Carl is doing in his arithmetic, his reading, and his social studies. To say, for instance, that Carl is doing "satisfactory" or "excellent" work in arithmetic is no more illuminating than to say that his grade in arithmetic is C or B. In contrast, consider the following statement: "Carl has just completed seven weeks of work in problems involving long division and has demonstrated his mastery of the process. He also understands what long division means as a mathematical concept and knows when it is applicable to the problem at hand. Carl is now beginning a study of fractions and I anticipate no difficulty for him as he has considerably better than average ability in arithmetic

and is interested in it. He already has a fairly high degree of understanding of common fractions, and should have little difficulty in problem solving or in mastering the processes involved. Carl already has completed most of the arithmetic covered by an average student during the first half of the year and should be working problems of sixth-grade level by spring. He is working with a small group that is moving along faster than the average of the class."

Many teachers object to this type of reporting because it is very time-consuming. This, of course, is true to some extent, but it is equally true that if competitive grading is done objectively and scientifically it also is time-consuming. The teacher spends uncounted hours grading papers and hearing reports for the purpose of assigning grades, which could well be eliminated to provide time for more productive activities.

Some schools are decreasing the number of reporting periods per year. One system, for instance, sends out the first series of letters at the completion of seven or eight weeks of school, the second letter the first week in February, and the final report at the close of school. In the first letter the child's adjustment to the new school situation is discussed and any special problems are presented for consideration. Parents are invited to visit the class and to discuss with the teacher any problem raised. In the second letter, detailed reports are made of progress in the several learning areas, in addition to discussions of special problems. The final report presents a picture of the child's progress as measured by tests and judged by the teacher; not, however, in technical test terminology, but in words meaningful to the parent.

Any serious problems that require immediate parental attention or cooperation are made the subject of a special letter, phone call, or personal conversation.

b. Some schools are experimenting with joint letters to the parent in which the pupil writes a letter home telling of his work and his own estimate of his success in achieving the set goals.

The teacher then adds his comments, and the letters are mailed to parents.

This approach has considerable merit, provided the letters are made the bases for teacher-pupil evaluation conferences, and provided both teacher and pupil are attempting a sincere evaluation of the pupil's progress and capabilities.

c. Many schools have adopted a check-list type of reporting on which the teacher checks a list of descriptive accomplishments and behavior patterns as highly satisfactory, satisfactory, and unsatisfactory. In general, such check lists are convenient but not too helpful to either pupil or parent in getting a very adequate growth picture. These weaknesses are partially remedied in some schools by providing spaces in which the teacher may write a few sentences and requiring that each check of "unsatisfactory" be explained to the parent. In other schools, this report becomes a basis for teacher-pupil conferences before the reports are sent home. Whether or not these conferences are beneficial is dependent upon the extent to which the student actively participates in the evaluation.

d. A few schools report to parents through scheduled teacher-parent conferences. If such reports are carefully prepared in advance by the teacher so that he has specific points to discuss, this procedure is to be recommended highly. The chief difficulty, however, is the time element. It is doubtful if this approach will gain much headway until the actual teacher-pupil load in most schools is decreased. Certainly it does not lend itself to a departmentalized system where teachers contact from over a hundred to nearly two hundred pupils daily, and where the parent would need to consult with each of the pupil's several teachers.

8. *An Evaluation Program Requires an Adequate Cumulative Record System*

Records of growth, maintained over a period of years, are as essential to an evaluation program as measurement itself. These

records must include data on social and emotional as well as physical and intellectual development and must be based on all known means of gathering data—standardized tests, attitude and adjustment inventories, observational records, physical examinations, case histories where necessary, work and summer-activity histories, extraclass activities, community activities and organizations, and teacher judgments of capacity in each of the curriculum areas.

It becomes relatively meaningless to attempt to evaluate a pupil's progress for the year, for instance, unless you know his starting point and his capabilities. A reading grade equivalent of 7.2 at the end of the eighth grade of school is meaningless in itself as a measure of growth. It does indicate that the pupil's measured reading ability is considerably below the average, but it tells nothing of his growth during the year. Possibly it was 7.0 at the beginning of the year; possibly it was 6.1. Has his growth been slow but steady over a period of years, or was there an extended period of little or no measured growth? Is he a pupil of high, average, or low academic ability? Have his teachers consistently rated him below average in reading ability? Has his health been good or has he missed considerable school? What has been his general attitude toward the school over a period of years? All these facts are important in the evaluation of the year's progress in reading and in planning the pupil's future reading program.

An adequate record system begins with the pupil's entry into school, is cumulative in nature, and covers all phases of the pupil's development. It should be so devised that it covers his whole life from kindergarten through the senior high school and should continue on into junior college and college wherever the organization as such permits.

SELF-EVALUATION EXERCISE

Directions: The following items relate to success and failure. Some of the statements and described situations are in harmony

with modern psychological thought; others are not. On a separate sheet of paper write the word "agree" if you believe the statement or the described situation to be in harmony with modern psychological thinking, or "disagree" if you believe otherwise, together with reasons for your agreement or disagreement.

1. In order to evaluate pupil progress in school *X* a nationally recognized achievement test is administered to every elementary grade, beginning with the first. This is supplemented by teacher ratings on citizenship, industry, and health. This apparently represents a relatively complete and effective evaluation program.
2. Cumulative records of pupil development might be all right if you could depend upon every teacher to interpret them intelligently. However, it is unfair to a pupil to have records of his bad behavior and low grades passed on from grade to grade as this can't help but prejudice teachers against the poor students and against pupils who have been disciplinary cases in the past.
3. Evaluation of pupil growth must be made in the light of a pupil's ability and experience rather than by set standards of achievement. The setting of definite standards of achievement for each grade in such fields as arithmetic, reading, and writing cannot be justified on psychological grounds as a basis for passing and failing pupils.
4. Bernard is a pupil in the fifth grade of a rural school. He is considerably below average in his academic ability and, although he tries to do the arithmetic assigned to him, is unable to get his work done without considerable help from his parents. An achievement test in arithmetic at the close of the year indicates that his general level of achievement is below that of an average fourth-grader. A letter is written to Bernard's parents stating that Bernard has failed in his fifth-grade arithmetic and, consequently, must repeat the grade the following year. From a psychological point of view this is a correct statement regarding failure on Bernard's part.

5. Conventional grades as a basis of reporting pupil progress to parents can be justified on the grounds that their meaning is well understood by parents and that they are definite indications of pupil growth or lack of growth in the various learning areas.
6. Mr. Worth, in attempting to get away from the disadvantages of the conventional grading system, has organized the work of his ninth-grade general science into a series of tasks to be performed each month. He sets a minimum assignment which must be accomplished by all to get the lowest passing grade. Students then may contract to do additional work for each of the grades above the minimum passing grade, so that a pupil who receives a grade of A will do considerably more work than a student who receives a grade of C. From the point of view of effective evaluation this system is to be recommended.
7. After a considerable period of study, the members of the faculty of an elementary school have set up a rather detailed statement of the aims of education. They now are attempting to devise ways and means of measuring pupil growth along the lines of the aims set forth and of evaluating behavior in the light of these aims. Their hope is that ultimately they will be able to report such growth to parents as well as to help the pupil understand his own development. These efforts are to be commended as the staff is following recommended procedures for evaluation.
8. The faculty of a town high school has devised a plan for grading in which each student is given an "ability index"; that is, he is considered to have adequate ability, if he applies himself, to earn grades equal to the ability index of A, B, C, or D which has been worked out for him on the basis of intelligence test scores, elementary-school grades, and teacher judgment. The actual report-card grade of each student is determined in the following manner: If a student with an ability index of C earns a grade of B he is given a grade of A on the assumption

that he actually has exceeded his expectations and should be rewarded accordingly. If, on the other hand, he earns a grade of D he would be graded F on his report card on the assumption that he had not worked up to his potential ability. Considering the factor of fallibility of teacher judgments and test scores, such a system cannot be defended adequately to justify its retention.

9. In a city elementary school the faculty has developed a system of grading in which students are marked chiefly on the basis of effort in a given subject area. For instance, a pupil of less than average ability in the field of arithmetic might earn a grade of B if the teacher became convinced that he was making a strenuous effort to learn, even though his actual progress was slow. As a means of reporting pupil progress to parents this system can be quite highly recommended.
10. Mr. X becomes principal of a town junior high school. In the past there has been a considerable laxity in both discipline and standards of achievement. As a part of a program of restoring the school to proper standards, Mr. X announces to his faculty that the assignment of grades must roughly follow a normal curve, with approximately the same percentage of combined failing and D grades as there are B and A grades, and with not less than one-third of the class receiving grades of C. Under the circumstances, this procedure is to be recommended.
11. In school *B* report-card grades are assigned very carefully on the basis of actual pupil achievement in the subject concerned. Frequent examinations combined with teacher judgment of the quality of work accomplished are the foundations of the grades received. In school *C* the faculty is making an attempt to measure progress in the development of desired behavior patterns and basic understandings of the nature of the social and physical world in which students live. Letter reports are then sent to parents in which teachers attempt to present a picture of pupil development in terms of the aims of education. The procedure of the latter school is much more

difficult of accomplishment than that of the former, but is much more in harmony with recognized evaluation principles.

12. School system *X* has developed a rather elaborate cumulative record system for recording factual information about each student from kindergarten through the senior high school. These records are confidential in nature and cover the areas of health, academic development, special interests and accomplishments, home conditions, vocational interests, and any other bits of information which may aid the teachers at the various levels to better understand the pupil. This, or a similar system of data-gathering and recording, is an essential to the development of an effective educational program in the school of today.

SUGGESTED READINGS

Driscoll, Gertrude: *How to Study the Behavior of Children,* Teachers College, Columbia University, New York, 1941.

Foster, Josephine C., and Neith E. Headley: *Education in the Kindergarten,* American Book Company, New York, 1936. Chap. XX.

Lee, J. Murray, and Doris May Lee: *The Child and His Curriculum,* D. Appleton-Century Company, Inc., New York, 1940. Chap. XV.

Torgerson, Theodore L.: *Studying Children,* The Dryden Press, Inc., New York, 1947.

Tyler, Ralph W.: in *General Education in the American High School,* Report of a subcommitte of the General Education Committee Commission on Curricula of Secondary Schools and Institutions of Higher Education of the North Central Association of Colleges and Secondary Schools, Scott, Foresman & Company, Chicago, 1942. Chap. XII.

CHAPTER XII

Personality Adjustment

PROBLEMS

1. From a psychological viewpoint, what is "personality"?
2. What is considered to be the function and responsibility of the teacher in regard to the personality development of the pupils of the school?
3. What is the chief weakness of the point of view that conceives the function of the teacher to be primarily that of searching out pupils for remedial treatment in personality development? What should be the approach?
4. What is the relationship of personality development to the satisfaction of the integrative needs of the individual? What are these needs?
5. What are the major escape mechanisms resorted to by the individual in cases of continued failure to satisfy major integrative needs?
6. Is escape behavior always undesirable? Explain.
7. How may compensation aid the individual in satisfying his

needs? Under what conditions may it result in undesirable behavior?

8. Is repression desirable or undesirable? Under what conditions may it be one or the other?

9. Do you agree with the often-expressed point of view used in defense of the conventional curriculum that "the child must learn to accept failure." Under what conditions would you agree or disagree?

10. What must be the relationship of the school to the home and community if the educational process is to be effective in wholesome personality development?

DISCUSSION

Developing Individual Personalities

In modern education the development of personality is accepted as one of the school's major responsibilities and at least equal in importance to the more conventional objectives. This, of course, does not mean that one can find in the curriculum of today's schools certain hours of each week set aside for a course in personality development. Although it does become a separate unit for group consideration in some secondary schools, personality, normally, is not something to be studied and practiced. Rather, its development is more of a guidance function exercised throughout the pupil's school life. It should be emphasized that the teacher is concerned with personality as a developmental function rather than merely as a remedial function; consequently he must be aware of his responsibilities for guidance of each and every pupil in the development of those personality characteristics deemed desirable for effective adjustment and full living. The particular needs of each individual child, of course, must be considered in addition to the over-all methods chosen to bring about sound social adjustment in the group.

In a previous connection the manner in which properly chosen group activities contribute to the development of desirable attitudes on the part of the members of a class was discussed in some detail. Some further attention needs to be given to children whose previous experiences have resulted in their adopting attitudes which are not consistent with the best interests of the group and thus, ultimately, with their own best interests.

Attempts at Adjustment

It must be borne in mind that every child strives to attain the best possible adjustment within the range of his capability. Children who have developed habits of success through experiences in problem situations, and who evidence an attitude of confidence in self and a willingness to coordinate their activities with those of others, find no difficulty in maintaining a satisfactory level of adjustment, as they are able to fulfill their fundamental needs. On the other hand, the child who fails to find satisfaction for his organic, emotional, or social needs must find ways of reconciling these failures with the necessity of maintaining his self-respect. If he is unable to achieve essential recognition because he has been unable to attain his goal, he then is compelled to devise some means of restoring and protecting his ego. It becomes intolerable to sit by and admit his incapacity. It may be impossible to ignore his defeat, but at least it must be made plausible, unavoidable, or reasonable in the eyes of himself and others.

It has been made clear in preceding chapters that the failure on the part of pupils to achieve set goals may be either one of two types: (1) they may fail to attain the standards which they have accepted or set for themselves and thus experience a sense of frustration, or (2) they may fail to reach the goals set up by the school or their parents and which they have not accepted as their own goals, in which case there is no experience of failure on their part, even though the school may consider them unfit for promotion. In a discussion of failure, these two types—one being failure on the part of the individual, the other on the part of the school—should

be clearly distinguished. Only when the pupil has *accepted* a goal which he subsequently finds unattainable is there an adjustment problem requiring that something be done to remedy the situation.

These attempts at overcoming or circumventing apparently insurmountable obstacles to one's success are in the nature of substitute satisfactions. In many cases, the child is aware of the fact that this substitute is not the real thing, but merely the best available solution. In others, he may consider his solution the full equivalent of real accomplishment, and in still others the substitute is so appealing that it is preferred to actual achievement of the goal.

There is nothing unusual about the first-named solution. If there is no apparent way in which one's goal can be achieved, it is the better part of wisdom to accept a different or lesser objective which falls within the range of possible attainment. Take, for instance, the boy who has hoped fervently to make the basketball team, but who discovers that a congenital heart condition keeps him from fulfilling that ambition. Yet his love of the sport is so great that he becomes manager of the team, arranging its games, handling its finances, and keeping its uniforms in good order. Without accepting this as an adequate substitute for playing on the team, he nevertheless looks upon his activity as one which brings him closest to the goal which he has been unable to attain because of circumstances beyond his control. As such, it is a thoroughly normal and realistic adjustment to unchangeable facts.

The second solution may lead to an equally acceptable form of adjustment. A girl who had always wanted to be a physician like her father found that mathematics presented a problem for which she apparently did not have the proper aptitude. With a great deal of effort she managed to pass the required courses in that subject, but when she tried to delve into the mysteries of physics, she found herself at a complete loss. A wise adviser pointed out to her that, laudable though her vocational objective might be, there were other outlets for her energies which were more nearly

within the range of her aptitudes. This was substantiated by her parents, who encouraged her to shop around until she found a field in which she was thoroughly interested and could find the satisfactions which she was seeking. After considering various possible substitutes for her original plan, she finally decided on domestic science as a field which offered her the best possible outlets for her energies and the greatest possible chances of success. This solution was accepted as equivalent to the objective which had appeared unattainable, and the girl does not feel that she has made a compromise in any sense of the word. She is as proud of her attainments as a dietitian as she ever could have been had she pursued her original vocational plans.

These two types of adjustment obviously are sound devices whereby the individual, conscious that insurmountable obstacles stand in the way of the attainment of his goal, faces the fact realistically and alters his goal to conform to his needs and capacities. There is nothing to recommend his persevering in a type of activity which does not in any foreseeable manner lead to the attainment of success. On the other hand, everything is to be gained by a person's evaluating his chances for success and, if the odds seem overwhelming, changing to a type of activity in which success is possible, considering his particular level and type of ability and interest. Such a substitute activity, then, may be considered for what it really is, a next-best solution, or it may even become so acceptable as to fully take the place of the original objective.

However, it is not always possible to make such a happy transfer. At times the individual may feel thwarted in his progress toward his goal, and often finds himself faced with the necessity of accounting for his inability to achieve. Lacking a proper substitute activity which is fully acceptable, he then must find reasons why his lack of success was unavoidable, discover ways of overcoming his failure, or ignore defeat altogether. Frequently the mechanism whereby the person attempts to maintain his self-esteem is not conscious, because facing the fact of failure may be too painful

to his ego. These techniques, whether conscious or not, by which he strives to achieve more adequate adjustment can be classified as rejection, acceptance, and defiance.

Rejection

The child may try to adjust to his apparent failure by rejecting its reality and refusing to admit it as such into his conscious experience. This may take any of the following different forms.

1. Repression

When confronted with a failure experience, the child may find it so incompatible with his concept of what he should be able to achieve that he is forced to exclude the experience from consciousness in order to maintain the integrity of his personality. It should be stated at the beginning that such a procedure cannot be carried out by conscious volition on the part of an individual because attempts to suppress an undesirable event in a conscious manner result in its gaining additional prominence. Although eliminated from the child's consciousness, the failure experience continues to survive unconsciously and remain active as a motive force which, if properly understood, may explain much of his future behavior. A person's irritability later in life, his feeling of shyness, his unwillingness to accept responsibility, may well go back to a childhood experience of failure for which satisfactory adjustment was not made consciously, but which was so thoroughly repressed that the person is unaware of the effect which it has upon his behavior. It is often difficult to recognize the real cause of apparently inexplicable behavior tendencies, and it is impossible for the individual himself consciously to recollect the causal experiences. Their continued existence and effectiveness as driving forces, however, can be gathered from the evidence obtained during unusual mental states induced by hypnosis and certain drugs, or through dreams and free associations. Under these conditions the person does not consciously control his thought processes and repressed

matters have an opportunity to emerge from the unconscious and manifest themselves without restraint.

Though repression serves the purpose of self-protection, its danger lies in the fact that an accumulation of repressed failures may cause the individual to acquire behavior tendencies which are not consistent with his best interests, but which, because of their unconscious origin, cannot be understood and altered conveniently. Only a rather far-reaching psychological analysis will succeed in exposing these hidden springs of action as the real causes for many of the "queer" reactions of an individual.

There is an essential need to develop satisfactory attitudes in regard to failure experiences if the child is to become well adjusted. A mere exposure of certain experiences as the basic cause of difficulties does not remove the necessity of dealing with them. Since the individual has in the past developed the habit of coping with failure in an unsatisfactory manner, he must be shown a better way of doing so rather than being left to experiment further. Adequate behavior patterns cannot be established merely by weaning an individual from his habitual ways of reacting, regardless of how unsuccessful that pattern may be. The new pattern must seem so desirable that the person wishes to adopt it, with the result that the old pattern becomes automatically and permanently superseded.

2. *Escape*

An individual may choose to run away from his failure experiences by engaging in a kind of behavior which is so absorbing as to preclude his paying attention to the activities in which he was unable to achieve success. Because his failures normally occur in his contacts with reality, there is a tendency to seek escape in the field of fantasy. This mechanism serves the individual's purposes temporarily by enabling him to achieve imaginary success in fanciful activities and situations which he accepts as substitutes for real success. Any well-adjusted person engages in a similar type of activity when he is daydreaming; however, the essential point of

difference is that in this case imaginary achievements are not accepted as real accomplishments, but normally serve as blueprints for outlining future behavior. Daydreams are used as a prospectus of what may be brought about if the individual succeeds in creating the conditions necessary for turning his dreams into realities. But a person who has accepted fantasies as an escape imagines that he is adequately adjusted and takes them as acceptable substitutes for actual accomplishments. By so doing, he loses contact with reality to such an extent that no effort is made to translate his dreams into overt reactions designed to bring about their realization. Such an individual refuses to accept the necessity for real accomplishment and is satisfied with whatever he can do with the least effort because his need for realization is amply fulfilled in his imagination.

For instance, a child born into a family of several older children faces the problem of trying to gain recognition in competition with more experienced brothers and sisters. His early position is apt to be one of inferiority, not only to the adults in the home, but also to the other children. It is likely that he will not be successful in attaining a status in the family group other than that of the "baby brother," a status which does not satisfy his need for full acceptance.

In an attempt to gain success under these circumstances, his young ego may follow a course of action as different as possible from that of the other siblings. Instead of joining them in their lively games and social activities, he may withdraw within the safety of his room and develop habits of solitary amusement. He resents more and more being drawn into family gatherings and is quite content to be left alone with his thoughts. These thoughts take the form of daydreams and in his imagination he fills his room with fanciful characters with whom he converses and plays games when the mood strikes him. Never does he have to ask permission to play with them, nor is he ever rebuffed or ridiculed, for they are creatures of his imagination who, of course, are created to be subservient to him.

From this early attempt to gain satisfaction of an urgent need, the child carries over into later life a habit of seeking solitary entertainment rather than joining a group, and of deriving more complete satisfaction from imaginary attainments than from coming to grips with reality.

A special form of escape is provided by the technique of *conversion,* through which the escape from failure to adjust satisfactorily expresses itself in the form of physical symptoms. During wartime the condition known as shell shock or battle fatigue is quite common. This enables the patient to avoid the necessity of adjusting to an impossible situation while, at the same time, preserving his self-respect and maintaining his prestige in the eyes of others.

The situation (to take an illustration) may require the boy who has been raised in a pronouncedly religious home to violate one of the Commandments by killing other men. At the same time, he would be violating his sense of loyalty to his country if he refused to pull the trigger when ordered. Paralysis of his trigger finger, his right arm, or his entire body enables him to remain true to his principles without detracting from his patriotism and military obedience. The fact that this mechanism is not conscious does not reduce in the least its effectiveness.

Similarly, a child who suffers from headaches, fainting spells, recurring dizziness, insomnia, general weakness, and the like when faced with too difficult a situation, is relieved from the need of accepting lack of success as evidence of inability, because factors apparently beyond his control have made achievement impossible. In a real sense of the word, he has not failed, since under the circumstances he could not be expected to succeed.

Again, it is obvious that a removal of the symptoms does not affect the child's need for escape or for some other form of adjustment, and that the only satisfactory solution lies in a removal of the underlying causes. Army psychiatrists know that, upon cessation of hostilities, they can expect a large percentage of their battle fatigue cases to show marked improvement and, frequently, complete recovery. When the need for escape no longer exists be-

cause a child has learned to deal more adequately with a once baffling situation, or because the underlying causes have been removed, the symptoms often are discontinued without necessitating further remedial procedures. However, the condition may be such that there is need for reeducation and redirection of attitudes and behavior patterns to the effect that relative inability to achieve can be accepted without truamatic results and dealt with rationally.

The teacher's responsibility for helping pupils to face their limitations openly without rejecting their consequences is a grave one. He is in a much better position than are the parents to point out the limits of his pupils' capabilities and the wisdom of their choosing and accepting goals which are within these limits. Parents, being by their very nature ambitious for their children and inclined to attribute to them greater potentialities than they actually possess, are likely to advise them to hitch their wagon to a star and thus lay the foundation for failure to achieve goals which they fondly thought them capable of reaching.

The teacher should be prepared to face the issue more realistically. He has at his disposal objective means of determining how far each individual can be expected to develop along given lines and should encourage each of his pupils to set for himself appropriate goals. These, of course, should take into consideration past performance as well as indicated aptitudes, evidenced interests as well as physical limitations, social maturity as well as general intelligence. Full allowance should be made for individual differences in all these respects in order to arrive at individualized rather than group goals.

When this is done, each pupil can progress toward an objective that is attainable to him because it is based on a consideration of his individual needs, aims, strengths, and weaknesses, rather than, as is too frequently the case, on parental ambitions and childish daydreams. When, notwithstanding these precautions, success is still not attained, the teacher can analyze the problem in conference with the pupil and help him determine the reason why

the expected results did not materialize. Perhaps it was a matter of the pupil's having used an approach which did not lead directly to the goal but which, with some modification, could take him there by a circuitous route; perhaps he had started off in the wrong direction and needs to be reoriented to reach his objective; or perhaps a temporary illness interfered with his ability to pursue his course in the expected manner and with the anticipated results. Whatever the cause may be found to be, it is essential that the pupil acquire the habit of diagnosing the problem and of realizing that, like success, failure to attain one's goal can be explained by carefully noting just what the individual did or did not do. When looked at in this manner, such a failure becomes a challenge to avoid making the same mistake in the future and an incentive to further effort, rather than an obstacle and a cause for undue emotional reactions.

Acceptance

In a previous chapter the effects of failure experiences were discussed and attention called to the tendency for the emotional reaction to failure to undermine the person's feeling of adequacy, not only in the particular field involved, but in a general way as well. An individual may interpret continued failure as an indication of his general inferiority and, consequently, approach his other problems with the expectation that they, too, will be incapable of an adequate solution.

Opportunities for the development of this submissive and, in a sense, fatalistic point of view, present themselves early in the infant's life. At such critical moments as the period of being weaned, it is essential that everything be done to prevent a feeling of inferiority from arising. In an infant's scheme of life, the nipple has become a goal which he has attained repeatedly in past experience. When this goal, which still exerts its incentive power, can no longer be reached, the failure is attributed to inability on his part, unless care is taken to replace the nipple with an equally desirable and attainable goal. Failing this, the resulting frustra-

tion may be expected to transfer to his attitude toward other objectives, so that the child approaches them with hesitation and without confidence in his ability to succeed.

As we have noted before, such a tendency is likely to be all the more powerful because the child is not consciously aware of its existence. It flows from an earlier traumatic experience which, though completely forgotten, continues to influence his attitude and behavior. Furthermore, it tends to be fortified by each successive event in which the child fails to attain his objective, and thus a vicious circle is estabished. The more he tries, the more often he fails and the more reluctant he becomes to try again. So there develops a gradually increasing fear of failure, which manifests itself in his growing unwillingness to undertake even tasks which he is quite capable of performing. More and more he begins to look upon himself as incapable and unfit, and accepts this role in quiet resignation.

Such children often are afraid to put on roller skates because they just *know* they can't learn to skate; they don't want to go to parties because they *never* can learn to dance; and in school they have great difficulty with any subject which they feel they aren't capable of absorbing. Thus the child, and often the adult, may go on refraining from participation in many activities from which he might have derived great satisfaction and pleasure had he been able to overcome his expectation of failure. Behind such an attitude there usually can be found an early childhood deprivation in which the expected success was not forthcoming, such as a change-over from the bottle to solid food, parental refusal to pay attention to tantrums which in the past had been promptly rewarded by picking the child up and fondling him, and many other similar experiences.

From such relatively minor failures—minor from the adult point of view, but crucial from the infant's—may result the inferiority feeling which handicaps the performance of many children. Their inadequacy, of course, is imaginary rather than real, but to them it is equally powerful as an obstacle to achievement. With-

out confidence in one's ability the full utilization of one's capacities becomes impossible, and the restoration of that confidence is the essential prerequisite to more adequate and better accomplishment.

Teachers should be on the alert to discover tendencies on the part of their pupils to react to lack of success by expecting failure in the future, especially in other respects than the one in which the original goal was not attained. With some ingenuity, they can demonstrate easily that pupil failure may be (1) an isolated event which need not be repeated, and (2) specific to the area in which it occurred.

Failure to spell accurately a list of twelve words chosen from a reading assignment may be due to a variety of reasons, including the pupil's inability to get his reading done the day before because the family happened to take him on a picnic, his bad luck in losing his book, or the attack of indigestion he suffered the preceding day. It certainly does not mean that he will be unable to pass the next spelling test, nor that he will have difficulty with arithmetical reasoning.

Instead of accepting their failures passively, pupils are to be trained to accept them realistically and to find adequate reasons for them rather than to consider them indications of future failures in the same and other areas.

Defiance

An alternative to the rejection or the passive acceptance of the reality of failure is to adopt a defiant attitude by recognizing the existence of failure but determining either to still succeed in overcoming the failure, or to compensate by outstanding success in some other field, and thereby gain the desired prestige. The necessity remains of reconciling this acknowledgment with the need for prestige and working out a compromise between the two which will protect the integrity of the child's personality. In order to bring this about, a substitute outlet must be found which will take the place of the failure experience and prevent the latter

from being traumatic. This can be brought about by the following mechanisms.

1. Compensation

The sting of inferiority is removed from the failure experience by an attempt to develop mastery either in the same field in which a failure occurred or in another. An unsuccessful experience in attaining a certain level of achievement may lead to an inordinate and disproportionate expenditure of energy on the task, with the result that a high degree of mastery may be achieved, but usually at the expense of other types of achievement. A child who has experienced difficulty with mathematics may set aside or neglect other subjects and devote all of his attention to this field. In this manner, mathematics may well become his strongest subject, and he may fail in others because of it.

On the other hand, his admitted failure to master mathematics may cause the child to concentrate on other subjects in an attempt to counterbalance an unsuccessful experience by success in one or more different activities. By developing athletic skill, by taking part in musical activities and dramatics, by spending an excessive amount of time in perfecting his literary accomplishments—in these and many other ways, a child may succeed in compensating for a specific subject failure.

Unfortunately, compensation also may take the form of less desirable activities, and much of the lying, petty thieving, sex play, and similar acts often included under the heading of juvenile delinquency can be attributed to the childish attempt to compensate for scholastic failure.

Although, when used with restraint, the compensation mechanism serves the purpose of the individual, there is real danger that it may develop into overcompensation and thus into a failure to achieve balance. It has been pointed out by many authors that the awareness of one's shortcomings frequently results in the individual's developing such strong compensatory tendencies that he becomes more poorly rather than better adjusted than would

have been the case had he acknowledged his failure. The boy who becomes a bully because he considers his sentimentality a handicap, the deformed child who insists in taking part in athletic activities, the football player who scorns books, and the studious youngster who prides himself on his inability to participate in group games—all these are children who are attempting to compensate for their failures in one activity or another by emphasizing achievement in the same or another field.

It is true, of course, that society may benefit greatly by this tendency. The history of civilization is replete with instances of greatness achieved as a result of it, from Demosthenes to Steinmetz. On the other hand, society may well suffer from the overcompensation in which some of its members engage as exemplified by Machiavelli, Napoleon, Hitler, and Mussolini.

It is interesting to speculate how different the history of the world might have been if each of the latter had been born of healthier parents and, as adults, had reached a few inches more in stature. Their fanatical drive for power undoubtedly was related to their comparative stature and health. From the individual's point of view, compensation may serve a useful temporary purpose, but it seldom results in his achieving the well-balanced personality which might be possible through other means.

2. *Rationalization*

In rationalization, an attempt is made to justify failure as inevitable or even desirable. Thus the stigma is removed and the individual's responsibility for his failure is denied. If the circumstances surrounding the unsuccessful experience can be shown to have been such that success was impossible regardless of the individual's ability or attitude, there is no longer any shame attached to his failure. The pupil who explains his poor grade by pointing out that the grading system was unfair, that the teacher had it in for him, the textbook wasn't any good, or he had to work so hard outside of school, often succeeds in making it appear to others and to himself that nothing but failure could have been expected.

Furthermore, it may even seem that failure was really more desirable, because in order to succeed, other pupils had cheated on the examination, brought presents to the teacher, or neglected their other work. Since the child was unwilling to do any of these things, his failure in his work now becomes a badge of honor.

It is easy to acquire the habit of finding plausible reasons for one's behavior when the real reasons are not acceptable. When carried over into adult life, rationalization frequently is so skilled that it is difficult to distinguish from the real causes of behavior. The father who administers punishment to his son for a minor offense probably is not aware that the spanking results from his own irritation at something that happened at the office. When a wealthy man leaves his estate to the government, few people are analytical enough to see how he avoided the necessity of involving his family in heavy inheritance taxes, and he is likely to be pronounced a true patriot. Many a pillar of the church has worked himself up to that position because of the standing which it would bring him in the community, and many philanthropists have found that their businesses prospered as a result of well-publicized donations. In each case, the *real* motives were hardly as laudable as were the reasons advanced for that type of behavior.

3. *Projection*

A form of rationalization in which behavior is explained by attributing to another person or group the same motives that sponsored one's own activity, is called *projection.* This technique shifts the blame away from the individual and thus protects his ego from acknowledging responsibility. Frequently these arguments are quite convincing to the unwary. Millions of Italians were impressed when Mussolini invaded Ethiopia with the slogan that wild African hordes had violated the sanctity of Italian soil, and countless Germans approved of Hitler's invasion of the Low Countries because, he claimed, Great Britain was ready to attack Germany from that side.

The belligerent child is likely to blame his adversary for start-

ing the fight; one who cheats on a quiz may report a classmate for dishonesty; and a child whose attempt to gain superiority takes the form of stealing often accuses others of the acts he has committed.

Teacher Responsibility

When the teacher has succeeded in showing his pupils how failure to achieve, for instance, may be overcome by proper analysis of its specific causes and how they may profit from this analysis by avoiding these causes in future efforts, there is no further need for the emotional reaction of defiance. Pupils will, with suitable experience, understand that a reasoned solution is more to their advantage than a defiant attempt to overcome an experienced difficulty. It will be obvious to them that the former will assist them to succeed in the future, while the latter presents no solution at all because it neither erases their past mistakes nor guards against future errors.

Once more, we have a problem of teaching the child to accept responsibility for his behavior and to face the consequences squarely. If the results of his activities are likely to be undesirable, that should have been considered before the act took place. Such foresight can be gained only if the child has been given ample opportunity to choose between alternatives leading to different goals and consequences, and if the choice of the "right" objective has been made worth his while. No amount of moral teaching will give him the experience necessary to make adequate, satisfying choices; only the satisfaction derived in the past from choosing wisely will guide his choices of the future.

It must be remembered that these mechanisms are of particular psychological significance when their developments are unconscious, because then they affect the individual's general pattern of adjustment rather than being a voluntarily adopted pose. Especially when the pupil is unaware that he is using these techniques does it become of vital importance to recognize them and take such precautions as may be necessary and expedient to prevent them

from permanently influencing the child's adjustment unfavorably.

Hence the importance that is attached to the psychological insight of the teacher, who should be able to recognize the needs of his individual students as well as the group needs of his class. His job is not done when he has selected projects in which all children can participate; he must arrange also to have each child take a part consistent with his personality needs and guide his activities so as to develop to the fullest traits which will bring the child to becoming a balanced personality. This responsibility is a grave one and far removed from the recognized function of the conventional school; but it is a responsibility which the teacher in the schools of today must face and discharge conscientiously if the aim of modern education is to be met in full.

SELF-EVALUATION EXERCISE

Section I

Directions: The items below relate to the discussion of personality adjustment. Each item consists of a statement of a problem or a psychological fact requiring completion by the selection of one of the three possible phrases, clauses, or sentences listed as *a*, *b*, or *c*. Read each item carefully, then do the following:

1. Select the phrase, clause, or sentence which best completes the statement or which provides the best answer to the problem of the item concerned.
2. Write down the symbol of the "best answer" (*a*, *b*, or *c*), on a sheet of paper, together with your reasons for selection, for each item of the exercise. Tell why you believe the answer you selected to be better than the two you rejected.

The fact that one of the three possible answers to an item is considered to be the best answer does not mean that the other two necessarily are wrong or false. Such may be the case; however, it may be that the "best answer" merely is more nearly complete than either of the other two, or that it is more in harmony with modern psychological thought. Remember, don't search for

"right" and "wrong" answers or completions to an item, but, rather, for the *best* one of the three possible choices.

1. An acceptable concept of the responsibility of the school in the matter of personality development of pupils is that—
   a. personality development must be considered primarily as a responsibility of the home rather than the school. However, the school will need to take steps of a remedial nature when it becomes evident that any particular home is incapable of adequately guiding the development of pupil personality.
   b. personality is in a process of continuous modification and is and must continue to be greatly affected by school environment, regardless of the attitude of the school toward accepting responsibility. The only point of view that can be justified on psychological grounds is that the school, working in close cooperation with all other community agencies, including the home, must accept a very high degree of responsibility for personality development of all children at all grade levels.
   c. the school, being the only agency capable continuously of exercising intelligent and effective guidance in personality development, must accept the major share of responsibility for such development.
2. Personality development—
   a. is something which may be modified greatly through group study in the schools.
   b. cannot be modified by group study, but is entirely a matter of the individual's inherent potential, modified by conditioning.
   c. is primarily in a state of continuous modification through experience and, as such, is meaningful to the learner and may consciously be affected through adequate motivation.
3. Donald is a junior-high-school pupil of considerable potential in the field of art, but has a great deal of difficulty with his arithmetic and English.
   a. It would be best to encourage him to progress as far as pos-

sible in the arts and crafts area, but still continue his efforts in arithmetic and English in the hopes that he would develop his abilities in these fields to a degree necessary for meeting his vocational and citizenship needs.

b. It would be best, considering his youthfulness, to urge him to put less time and energy on his art and devote most of his time to the areas in which he is lacking in ability in order to bring his achievement in these areas up to the average of his class.

c. He should be allowed to drop his work in English and arithmetic and devote a greater share of his time to the area in which he is most successful.

4. The problem of pupil goals was being discussed by the faculty of an elementary school. The following three points of view were presented by various faculty members for consideration. The one most acceptable is that—

a. pupils should be encouraged to set their goals at a very high plane in relation to their individual abilities, as this will challenge them to greater efforts over an extended period of time. It is better to have a goal set beyond one's reach than to have it set so low that there is a chance that the pupil will not have to strive hard to reach it.

b. goals should be set from day to day, or at least from week to week, as pupil interest span at the elementary level is too short to justify encouraging longer time goals. Goals always should be set so they can be reached with reasonable effort as no child should be allowed to get himself into a position where there is danger of his failing to achieve his set goals.

c. pupil goals should be progressive in that one goal leads on to a higher goal, and along the lines of educational aims. The difficulty level of a particular pupil's goal and the time element in its accomplishment must be matters of individual decision, but must be realistic in terms of the pupil's ability. A pupil should be encouraged to set his goals high enough to

provide real challenge, but these should be revised downward if certain goals appear to have been set too high for an individual, and upward if apparently set too low.

5. During the same staff meeting the effects of success and failure upon the personality of the pupils came up for consideration. Of the following expressed opinions the one most acceptable from a psychological point of view is:
   a. Children should not be forced into situations where failure is almost certain by reason of lack of ability, as such failure, if continued over a period of time, will drive a child into practice of one or more of the escape mechanisms or into a defeatist attitude—either of which is very detrimental to the wholesome development of the child's personality.
   b. All children in a given group should be required to perform the same school work as it is not fair to allow some children to do less than others. Also, children have to learn to compete outside of school and they cannot learn to do this successfully if allowed to get by with less work in school than others. They have to learn how to "stand up and take it," and they had better learn it in school, even though they may have to do it the hard way.
   c. Children need to learn to meet and accept failure as well as success. Consequently, it is good for the child to be placed at times in situations where he is bound to fail. After all, life is full of failures and children need to learn how to accept it in school.

Section II

Directions: The following items relate to personality adjustment. Some of the statements and described situations are in harmony with modern psychological thought; others are not. On a separate sheet of paper write the word "agree" if you believe the statement or the described situation to be in harmony with modern psychological thinking, or "disagree" if you believe otherwise, together with reasons for your agreement or disagreement.

1. The point of view that "personality" is a summation of all of an individual's traits and characteristics is quite acceptable to modern psychologists.
2. In city *X* there is an administrative policy that no student will be graduated from the six-year elementary schools until he has reached a degree of proficiency in the so-called basic skills equal to that of an average beginning seventh-grader. However, it is agreed generally that no student will be required to repeat the sixth grade more than once. This policy of "maintaining high standards" cannot be recommended as it fails adequately to recognize the importance of wholesome personality development as a major responsibility of the school and actually is detrimental to such development.
3. Josephine is an eleven-year-old girl of exceedingly high academic ability and is definitely superior in her schoolwork to the others of her class. She was double-promoted once at the second-grade level and her teacher has recommended double promotion again at the close of the year. Physically and socially Josephine is near average for her age and is among the smaller and younger children of her present grade. While one might debate the advisability of her being double-promoted at the close of the year from the point of view of special adjustment, there would be little or no danger of such promotion adversely affecting her personality development.
4. George, a high-school junior, has for years had a great desire to become an electrical engineer. However, he finds mathematics exceedingly difficult to understand, although he does well in other areas not requiring a high mathematical ability. He is becoming discouraged and has about given up the idea of going on to college, although his father, who is a prosperous farmer, is quite willing to help him finance a college education. It would seem desirable under the circumstances to counsel with George in the hope that he might set up a substitute vocational goal which is obtainable and through which he might fulfill his desires to do something worth while in life.

5. Perry is a child of eleven years of age living in a large city. His parents early taught him to fear the "gang" on the south side by frightening him when he was quite small with tales of what would happen to him if he went over into the slum neighborhood or if he were caught by its inhabitants after dark. Perry, consequently, is now afraid to go downtown alone and consistently avoids the rougher sections of the city, although he has no clear conception of what causes his excessive fear. His parents are quite worried because of his timidity and are trying to shame him out of it. This is an example of repression and probably will require psychiatric treatment if the fear is to be overcome.
6. Jackson is an average boy in the fifth grade. He is considerably below average in his academic ability and has come to the conclusion that he "just can't learn arithmetic and reading." He plans to quit school when he reaches the compulsory age limit. This is an example of conversion.
7. Margaret received one of the lower scores on her chemistry examination and, consequently, a grade of D on her term report card. She explains to her mother that others got high grades by cheating when the teacher left the room, but that she wouldn't cheat even to get a high grade. This apparently is an example of the escape mechanism known as compensation.
8. Mary is a very sensitive child and is unhappy in school, where she frequenty is reprimanded severely because she is unable to get her lessons completed on time. She has developed such a condition of nervousness that the family physician advises withdrawing her from school for the balance of the year for health reasons. This apparently is an example of conversion.

SUGGESTED READINGS

Betts, George H.: *Foundations of Character and Personality,* Bobbs-Merrill Company, Indianapolis, 1937.

Blatz, William E.: *The Five Sisters,* William Morrow and Co., New York, 1938.

Blos, Peter: *The Adolescent Personality,* D. Appleton-Century Company, Inc., New York, 1941.

Burnham, William H.: *The Wholesome Personality,* D. Appleton-Century Company, Inc., New York, 1932.

Koffka, K.: *Principles of Gestalt Psychology,* Harcourt, Brace & Company, Inc., New York, 1935. Chap. XIV.

Morgan, John F. B.: *How to Keep a Sound Mind,* The Macmillan Company, New York, 1947.

Murphy, L. B.: *Social Behavior and Child Personality,* Columbia University Press, New York, 1937.

National Society for the Study of Education: *Forty-third Yearbook,* Part I, "Adolescence," Public School Publishing Company, Bloomington, Ill., 1944. Chaps. XI–XIII.

Prescott, Daniel A.: *Emotion and the Educative Process,* American Council on Education, Washington, 1938. Chap. VI.

Sherman, Mandel: *Mental Hygiene and Education,* Longmans, Green & Co., Inc., New York, 1936.

Wheeler, Raymond H., and Francis T. Perkins: *Principles of Mental Development,* The Thomas Y. Crowell Company, New York, 1932. Chap. XII.

Wolff, Werner: *The Personality of the Preschool Child,* Grune & Stratton, Inc., New York, 1946.

CHAPTER XIII

Psychological Principles and Their Implications for Teaching

PROBLEMS

1. What is the "principle of individual differences"? What does its acceptance mean when applied to curriculum improvement?

2. What is meant by "trait differences"? What are the implications for educational practice?

3. What is the full meaning of the statement that "Education is a process of experiencing"? Criticize or defend this point of view.

4. Criticize or defend the point of view that learning is a creative process. What are the curricular implications of the modern concept of the nature of creativeness in the individual?

5. What is meant by "insight" in the learning situation? Is it correct to say that effective learning in problem situations is possible only if the learner is capable of gaining insight into the situation? Explain.

6. What is meant by purposive learning? Can an effective learning situation be developed otherwise? What are the curricular implications?

7. Is it correct to say that behavior is the response of an organism to a particular stimulus? Explain.

8. Under what conditions is transfer of learning likely to take place? In what ways will the educational process be affected by the teacher's concept of the conditions of transfer?

9. What are some of the conditions essential to the development of good mental health on the part of pupils? To what extent is this a curriculum problem?

10. To what extent, and how, is emotional behavior a matter of concern to the teacher?

11. What is the teacher's relationship to the group in the modern school? Should the teacher be thought of as a director or as a guide in the planning and executing of group learning activities? Explain.

12. What is meant by the terms "social integration" and "personal integration"? What changes are essential in the curriculum of the conventional school if it is to be highly effective in contributing to both?

A SUMMARY

In prior chapters various growth factors and principles of learning have been discussed at some length. In this chapter those psychological principles considered basic to modern education are brought together in summary form, together with their major implications for classroom teaching in particular and for the total curriculum in general. It is not our intent to present materials and ideas new to the discussions of the book, nor to elaborate on the

principles, but, rather, to bring previously discussed concepts together in convenient form. Following, then, is a statement of those principles of learning which it is believed each teacher and administrator should accept and put into practice.

1. Individuals Differ Greatly from Each Other in Their Ability to Learn in Any Given Learning Field or Situation

Regardless of whether it is a first-grade class learning to read or a senior-high-school class in social studies, the pupils differ so greatly from each other in their abilities to attain success that set standards of achievement for all are neither possible nor desirable. The only satisfactory educational program is one in which these differences are recognized and every effort is made to adjust the curriculum to the nature and needs of the individual pupil. As discussed at some length in Chap. IX, it means careful study of each pupil to determine his capabilities, interests, and needs; it means the development of learning situations in which each child can participate successfully and develop continuously along those lines of growth termed the aims of education. It also means obtaining reading materials of different levels of difficulty for use with each of the major units or topics of the curriculum, a greater utilization of audio-visual aids, and the development of various types of learning activities in the classroom so that those who cannot progress satisfactorily through one type of activity can do so through others more in harmony with their particular capabilities. It means individualized instruction in the development of those abilities in which growth is primarily individual in its very nature—for instance, in spelling, writing, parts of arithmetic, typing, and the more mechanical aspects of reading. It means, too, the so-called experience or activity approach to teaching in those learnings which are chiefly social in character, with emphasis on varied and cooperative activities in which each pupil contributes to the group in accordance with his own capabilities to contribute. It means, in short, teaching *children,* not *subjects.*

2. Each Child Differs Greatly within Himself in His Ability to Learn in Each of the Several Areas of the Curriculum.

This is generally spoken of as the principle of trait differences. Its validity can easily be determined by anyone who will examine carefully his own abilities to achieve success in various fields of human endeavor.

When recognized fully in the school it means that no child is expected to achieve equally in all subjects and activities. A pupil with superior academic ability normally will do better than average in most academic types of learning situations, but even here differences are to be expected. Pupils should be encouraged to put extra effort into tasks where learning is difficult for them, provided it can be demonstrated that this is essential in order to reach a minimum level of achievement necessary to fulfill their purposes in life; but they should not neglect those worth-while areas in which success comes easily, as it is in the fields of their greatest capabilities that the best chances lie for future satisfactions. The quite common practice of barring a boy from athletics or from the school play because he is flunking his geometry or his English is entirely indefensible on any sound educational grounds. It would make just as good sense educationally to insist that he drop his geometry until he has demonstrated his ability to make an athletic team. Such reasoning is based on the old philosophy that certain disciplines, because of their intellectual and traditional characteristics, are more respectable than others, a point of view no longer acceptable in the elementary and secondary schools.

So-called "ability grouping" is a violation of the principle of trait differences, unless such grouping is done separately for each subject or activity and on the basis of the person's ability in the particular subject or activity. Even then it is not to be recommended as a general practice, as there are better ways of solving the problems involved, ways that better fulfill current educational and psychological thought.

3. *Learning Is a Growth Process—a Process of Maturing through Experiencing*

Concepts, attitudes, appreciations, and abilities are in a state of continuous modification. One does not develop a scientific attitude, together with the ability to approach problems in a scientific manner, at any given grade level or in any one specific subject. Rather, these are matters of continuous development and are modified at all levels of the school and in numerous learning areas. When applied seriously to education, for instance, argument will cease about the particular grade level at which the parts of speech, fractions, or civil government should be taught, and it will be recognized that such teachings are the responsibilities of all grade levels. Primary children, at the time they become aware in their letter and story writing that some sentences are not complete, begin to learn that some words stand for objects or are the names of things and other words tell what is being done. At this time they are beginning to develop concepts of parts of speech, whether we call the noun "the word that tells what something is" or give it the name of "noun." If this were recognized by teachers, and if all opportunities were grasped to develop concepts of parts of speech over a period of years as the pupils' awareness of needs increased, much of the confusion of teaching parts of speech could be avoided. The concepts would develop naturally rather than being kept as deep, dark secrets until the point is reached where the course of study indicates that parts of speech are to be taught.

There is hardly a concept believed essential for development at the secondary level which doesn't have its roots in activities of the primary school. It must be recognized, for instance, that the attitudes toward other people so essential to successful marriage, or which will wreck marriage, are being developed right down in the kindergarten as well as in the unit on family relationships in the twelfth grade.

It means that each and every teacher must have a clear concept of specific behavior patterns called the aims of education, and that

the activities and materials of the classroom must be evaluated in terms of their contributions to these aims. This rather than any conventional body of subject matter should determine the curriculum of the classroom and the whole school.

Real learning, that is, the modification of behavior, comes through experience in the desired form of behavior, not from studying and reciting lessons about it. The ability to express oneself creatively, for instance, is developed in an environment rich in opportunities for continuous creative expression over a period of years; it definitely doesn't come from studying about great writers and great musicians. Likewise, desired citizenship qualities develop out of a democratic school situation where children are living "good citizenship" rather than from textbook studies of civics alone.

It means, further, that there must be increased recognition that all areas of the curriculum must be planned on a vertical basis: that is, that the elementary and secondary teachers and administrators and curriculum workers plan cooperatively for the whole school life of the pupil, so that there is continuous growth from one grade to another. The seventh-grade pupil is merely one grade above the sixth-grade pupil, and the tenth-grade pupil one grade above the ninth-grader. There are no differences in their basic needs, nor in the aims of education at these different levels.

4. *The Child Is a Creative Organism and, as Such, Capable of Creativeness in His Expression*

This represents a marked change from the thinking of two or three decades ago when it generally was conceded that only the exceptional few possessed real creative ability. Part of this change represents a modification in the concept of creativeness; part of it grows out of a better understanding of the nature of the child and of the learning process. Not many years ago, educators contended that differences in creativeness were differences in kind rather than degree. Either you had it, and could create masterpieces which would live through the ages, or you didn't. By far the great ma-

jority of children didn't; consequently they would be consumers rather than producers of art, literature, music, and rhythmic expression. This meant that the chief function of the school, then, was to teach an appreciation of the works of the masters and through imitation to develop the pupil's ability to express himself in an acceptable manner.

Today creativeness is considered to be a matter of degree rather than of kind. All persons possess creative ability, but to different degrees. At any time that a child expresses himself in a manner which for him is original—regardless of the fact that thousands may have done the same thing before—and at any time that he improves upon his expression, he has engaged in a creative act.

Actually, it has been demonstrated that a fairly high degree of creative ability is far more prevalent than was thought to be the case in the past, when the curriculum was so organized that creativeness was stifled rather than encouraged.

The application of the above principle, then, means that the school curriculum must be so developed that it is rich in experiences stimulating self-expression in the arts and crafts, music, speaking and writing, and in rhythmic activities. It means that most teachers must be reeducated, including the younger ones, so that they are qualified to recognize and guide creative endeavor. This latter is one of the great needs of education today, as few teachers themselves have been so educated that their creative potentialities have been more than partially developed.

5. *In Situations of a Problem-solving Nature, Effective Learning Is Possible Only If the Learner Is Capable of Gaining Insight into the Learning Situation*

This does not mean that he must be able immediately to understand a particular reading in its entirety, to complete a physics experiment successfully the first time, or to gain a thorough understanding of the effects of price control with an hour of study. What it does mean, however, is that, given the incentive and the means, with persistence the student ultimately can see through

the problem or problems involved. Pupils, for instance, who have memorized theorems in geometry have not *learned* geometry. They must be able to reason through the solution without dependence on memory alone. If the pupil's ability is such that he cannot do this under good teaching, then his time in geometry class is being wasted and he should be engaged in activities where successful achievement is possible.

Probably inadequate teaching procedures and failure to provide the proper materials are responsible for more failure to learn than is lack of pupil ability. The problem of providing materials at the pupils' level of maturity and of developing less academic and more psychologically sound learning experiences is one of the great challenges to educators. The development of an experience curriculum with increased emphasis on purposeful activities designed to provide an experiential basis for more academic types of activity is to be encouraged. A better adjustment of the curriculum to the capabilities of the student is an essential to effective learning. Much more energy must be devoted to the development of evaluation techniques and instruments in order that the degree of pupil understanding in the various problems of the curriculum may be measured, and materials, procedures, and pupil schedules modified accordingly when desired understanding and abilities are not being achieved.

6. *The Learner Is a Goal-seeking Organism and Learns Most Effectively When Proceeding toward Goals Recognized and Accepted as His Goals*

This implies a greater amount of pupil participation in setting up the aims of a particular learning activity and in planning the experiences essential to their accomplishment. It means the elimination of assignments arbitrarily made by the teacher, with the pupil in a lesson-getting school environment. Accordingly, goals must grow out of an interest in the activity itself and must fulfill recognized needs of the pupils concerned. This leads to the elimination of the conventional system of marks or grades, with its

external motivation, and the development of a real evaluation program based upon the achievement of goals arrived at cooperatively by pupil and teacher and in harmony with the aims of education.

The so-called "doctrine of child interest" has sometimes been interpreted to be synonymous with entertaining. This is a complete misunderstanding of what is meant by interest. Most of the things in which we have an interest represent hard work if the goal is to be attained. The farmer has a keen interest in care of his milk cows or his field of corn. Each represents long and, at times, dreary hours of toil and anxiety, but he perseveres because of his interest in a good crop of corn and high milk production. Certainly his work is purposive—goal-seeking. With equal certainty it is not "soft" or "sugar-coated" or entertaining. Probably it would be better to speak and think of school learning situations being "purposeful" rather than "interesting," as "purposive learning" is less apt to be misinterpreted.

7. *Motivation of the Learner Can Be Explained Only in Terms of Multiple Causation*

In any learning situation the pupil is affected by a great variety of factors that determine his motivation or lack of motivation in the task at hand. Among the factors of greatest influence are the teacher, conceivable goals, experiential background, readiness, mental set, and the experience of success. It is highly important for the classroom teacher to realize that an individual responds to a total situation rather than to any single stimulus, and that a classroom situation at any given time operates differently in its motivating effect on each pupil in the room. James may be in excellent spirits this morning and ready to tackle just about any job with zest. Alice has a sick headache and wishes she were at home in bed. Henry's dog was run over yesterday and he can't get it out of his mind. Mildred is exceptionally interested in music and art, but dislikes arithmetic and dreads the arithmetic period. Jerry likes his teacher immensely and is ready to follow any suggestion that comes from him. Virginia is sulking over a failing grade on

the geography test and thinks the teacher unfair. She is wishing her folks would move so she could change teachers.

And so it goes, straight through the class. It is obvious that what will be adequate motivation to busy one pupil in his work may fail to arouse another out of his daydreaming or overcome his dislike for the work or for the teacher. Effective motivation is possible only as the teacher strives to understand each member of the class, and as he utilizes varying motivating activities so that there is well-motivated and purposeful activity on the part of the highest possible number of pupils in the class.

8. *The Ability to Generalize Forms the Basis upon Which Transfer Is Made in Problem-solving Situations*

The ability to bridge the gap from one situation to a different but similar one is determined by the extent to which the individual has developed generalizations through wide experience and application with the particular type of learning concerned. For instance, a pupil who has developed adequate concepts of percentage and fractions through wide experiences in mathematics will recognize their applications to mathematical situations different in some ways from the specific situations in which the concepts were developed. A pupil who works his problems in percentage and fractions by following the rule becomes confused when the situation is changed from the ones in which he has had practice in applying rules. The student who has memorized the law of diminishing returns from his textbook is not necessarily able to detect its operation in the business life of the community. On the other hand, the pupil who has arrived at this generalization himself through guided experiences, both in reading and through study of the business of the community, is far more apt to observe its action in the life round and about him.

The schools, then, must stress the development of learning situations leading to reasoned understandings gained through broad experiencing and put much less reliance upon book study alone.

9. Security, Success, and Prestige Are Absolute Essentials to Mental Health of All Pupils

This principle, if accepted seriously, means the development of teaching situations in which each child can know successful achievement. It implies the adjustment of the curriculum to the needs and capabilities of the learner; conversely, it spells the end of set grade standards as a basis for judging a pupil's achievement. It necessitates the development of procedures and techniques to evaluate achievement in terms of actual growth and in the light of the pupil's capabilities to learn. It also means that the teacher must utilize every means at his disposal to develop a better and more complete understanding of each child, his needs, and his abilities, in order to guide the pupil more intelligently into learning situations in which he can attain success and through which he can maintain his prestige with his social group. Each pupil must develop a better understanding of his own capabilities and limitations and be able to plan his activities accordingly. He must have a feeling of "belongingness," and know that he is wanted, that his contributions to the group are worthwhile and appreciated, regardless of how meager some of them may be. Finally, it means the elimination of competitive grading as a basis for reporting progress and the substitution of more meaningful and more psychologically sound procedures for evaluating pupil growth and for keeping the parent and the child informed of progress in school.

10. Learning Is Emotional in Nature As Well As Intellectual and Physical

The school, if it is to be highly effective in the educaton of youth, must be concerned with the all-round development of its charges. It must recognize that planned emotional development is every bit as essential as the development of intellectual learnings and physical skills. What the child is, what patterns his behavior follows, is every bit as much a matter of his attitudes and his appreciations as it is of his intellectual growth. The development of ap-

preciations of the fine and beautiful in life, the development of wholesome and desired attitudes in his relations with other people and in his vocational and avocational activities, are fundamentals of education in as true a sense as the three R's, and probably more so. The aspects of mental health must receive as much attention as intellectual growth if the pupil is to develop into a well-integrated personality capable of full living and reasoned activity.

11. The Teacher Is an Integral Part of the Pupil's Psychological Environment

The teacher must recognize that in all his activities in the classroom he is directly affecting the behavior of growing and learning organisms; that what he does and says and, often, what he fails to do or say, is modifying the behavior of these organisms along desirable or undesirable lines. A nod of approval, a sarcastic remark, a bit of advice to a group or an individual about the task at hand, a failing grade, or a welcome to a returning pupil—all these seemingly little things are personal and important in their effects upon the highly plastic organisms of the maturing pupil. Each teacher must realize that what the class is and does is more directly a reflection of the teacher and his personality and behavior than of any other factor in the environment. The teacher can make the environment pleasant and satisfying or highly unsatisfactory to the pupil. He can foster a democratic spirit and organization with its encouragement of individual participation, or he can create a dictatorship with all its restrictions upon personal initiative and liberty. He can guide pupils into serious and purposeful learning situations, or he can allow them to dabble in confusion. He can affect each child positively or negatively, but affect him he does, for good or bad. No group of persons has greater responsibilities for the youth of America than the teachers of the schools, because whether they will it or not, they are a part of the child's very life at a period when his behavior patterns are in a highly formative stage. Teachers must recognize and accept this responsibility; they cannot dodge it even if they so desire.

Next to parents, teachers occupy the most strategic spot in the development of the citizens of this society; there can be no excuse for failure to grasp its significance.

12. Integration Is Essential to Wholesome Development of the Individual and Society

The well-integrated individual is a person of good mental health. He has a wholesome philosophy of living and has developed his capabilities of adjusting and readjusting his behavior to meet changing conditions of life. He is able to approach new problems of living with confidence and to bring past experiences to bear in their solution. He is a person whose social, intellectual, and emotional growth keep pace with his physiological maturation. Integration, of course, is a matter of degree, ranging from a state of high integration to a state of almost complete disintegration. To the extent that one lacks confidence and the ability to readjust his behavior patterns to fit changed conditions, to that extent he lacks integration. The person torn by doubts and fears, who is unable to make and act on reasoned decisions or who is a victim of his conflicting emotions, is approaching a high state of disintegration.

In the same manner, a social order is well-integrated if there is a commonness of ideology and purpose among the individuals making up that society and if that social group is capable of modifying its mores and institutions to fit changing economic and social conditions. To the extent that there is inner conflict between groups within the society, to that degree it lacks integration. As conflicts, hates, and doubts grow within and between groups of individuals making up the social order, a growing state of disintegration exists which may reach almost complete disintegration. History is filled with examples of social disintegration, from the dissolution of the Roman Empire to the present chaotic conditions of Europe and Asia. Even in the United States today there are alarming evidences of disintegrating forces which may tear our social group apart if we continue in our inability to find solutions to problems

of labor-management relations, racial discrimination, equitable distribution of wealth, and political corruption.

The implications for education are many and are vital to the very welfare of society as well as the individual. From the point of view of the individual it means doing a much more effective job of understanding his potentialities and his total needs—physical, emotional, and social as well as intellectual—and of developing a curriculum better planned to provide all-round growth of an integrative nature. It means an experience curriculum in which the pupil continuously is learning to adjust to new situations by actual experience in so doing. Much of this experience must be acquired under careful guidance during the formative years of the pupil's life to ensure that it will be integrative in nature rather than disintegrative. There must be a much greater cooperative effort on the parts of all agencies affecting the pupil's development—home, school, church, boy and girl scouts, juvenile authorities, and all other agencies of the community having contacts with youth. It means that each teacher must have a guidance concept of education and each school a carefully planned guidance program throughout the school life of the individual. It means further that each teacher, himself, must be a well-integrated personality, with an understanding of the facts and principles of human growth and development and of the learning process. He must know the indications of good and poor mental health on the part of his pupils and be able not only to develop a program conducive to desired behavior patterns, but to work with experts in applying remedial procedures when necessary.

From the point of view of social integration, the implications are equally important. The school must become a much more potent force than ever before in developing the ideals of democracy essential to all, together with the desire and ability to act upon these ideals. The school must be intensely aware of the major, long-range issues of social living—economic, social, and political, and must develop a curriculum which will lead pupils into a continuous and realistic consideration of and experience with these major

issues of life, in the hope that by this means a greater degree of intelligence and tolerance will be drawn upon for their solution. The public-school curriculum must be geared much more closely to the social, economic, and political life of the people and to a more scientific approach to problem-solving. Each teacher must develop a better understanding of those functions which must be performed by the social group and those needs which must be satisfied if the society is to continue to perpetuate and to improve itself. He must be able to develop a classroom curriculum in which there will be continuous experiencing in the performance of these functions of living in order to promote a better understanding of them. All the resources of education must be devoted to the development of steadily increasing degrees of social and personal integration, because it is only thus that education can fulfill its destiny.

SELF-EVALUATION EXERCISE

Directions: Many of the situations described below are in harmony with accepted principles of learning; others are not. If you believe the situation presented in an item is in line with modern psychological thought, write the word "agree" for that item on a separate answer sheet. Then state the principle or principles which are illustrated as evidence for the correctness of your decision. If you believe the situation not to be in harmony with accepted learning principles, write the word "disagree" and state the principle or principles that are violated. React to the whole situation, including the ultimate action, rather than to any separate part alone, as any given situation may possess acceptable parts, yet be undesirable as a whole.

1. Mr. Jensen, principal of a four-teacher rural elementary school, has been to a convention and upon return desires to develop his school into more of an "activity" school. He calls his teachers together and tells them what he wants, and they discuss the problem at considerable length. At last they decide that they will develop a number of individual activity projects

in each room, and children who are "up" in their lessons will be allowed part of the day to work on these projects.

2. Ruth has been confined to her home with a serious illness for several weeks and now has returned to school. Ruth never has been better than an average student in her academic activities and now finds herself very much behind. The teacher tells her not to worry about that, to do the best she can to fit into the group activities, and that she can start in her arithmetic and spelling from where she left off. She also tells Ruth not to worry about failing; that she will be promoted if she will just do the best that she is able to do; that she had better protect her health at this point rather than to worry about being behind others in the class.
3. Mrs. Black administers a standardized reading test to her beginning ninth-grade class in a town high school and finds that there is a difference of nearly two years between the highest fourth of the class and the lowest fourth of the group. She also discovers that of the 34 pupils tested 7 have reading abilities, as determined by the test, below that of an average beginning eighth-grader, and that 3 of them have reading abilities of less than a beginning seventh-grader. This is definite evidence of poor instruction in the elementary school and certainly indicates the need of a program of improvement of reading instruction in the grades.
4. Marjorie has demonstrated a very high aptitude in her work in music and also is exceptionally interested and capable in homemaking. However, she does poorly in her mathematics and English and has failed in Spanish. Marjorie's adviser and the principal decide that Marjorie's mediocre and poor work in these latter studies is due to a lack of interest, as her work in the other classes shows she has the ability to do much better. Consequently, they decide to try to get Marjorie more interested in her total school activities by convincing her that she may be unable to get into college when she graduates if she doesn't raise her grades in the academic subjects.

5. James is highly interested in athletics in high school and is an outstanding athlete. His school citizenship is above reproach, but he is of rather low academic ability and is failing in geometry and history. His mathematics teacher recommends that James be barred from athletic participation until he brings his work up to the passing mark. The principal refuses to do this and allows James to continue his athletics.
6. There have been a considerable number of complaints to the state superintendent of an Eastern state that the requirements for the teaching of fractions in the fifth grade are entirely too high and that the children are being passed into the sixth grade with an inadequate mastery of the required processes. A state arithmetic committee is appointed to study the problem and make recommendations. The committee agrees that the complaints are justified and recommends that the teaching of fractions be postponed until the sixth grade.
7. The curriculum committee of a small city school system has adopted a statement of the aims of education to be used as a guide in planning the learning activities at the various levels of the school system. The staff of an elementary school is discussing these aims and is considering how and when they can be accomplished. The development of a scientific attitude, together with the ability to apply scientific procedures in solving the problems of living, is the aim under immediate consideration. Mr. Brown contends that this behavior pattern must begin in the primary grades, and that experiences leading to its continuous development must be a part of the classroom curriculum of all elementary and secondary grades. Others object to this point of view and express the opinion that primary children are too young and immature to be expected to study problems scientifically. Mr. Brown and others who believe as he does finally convince most of the staff of the correctness of their point of view.
8. Miss Levinsky so teaches her third grade that much of the art and music of the class are developed out of a unit on "People

of Our Community." She encourages the children to utilize their own ideas as a basis for their arts and crafts activities and also to compose many of their own songs in connection with the activities of the unit. The primary supervisor is convinced that this approach is resulting in a neglect of the techniques of art and music and insists that these must be developed before children can be expected to do any really creative work. Consequently, in order to ensure that the development of essential techniques will not be neglected, she directs that Miss Levinsky devote at least three periods a week each to a more formal study of music and art.

9. In one of the junior high schools of city *X* the staff has fused what used to be English and social studies, so that the activities of these areas now are developed together under one teacher during a double period. The study, for identification purposes, is now termed "Social Education." The theory of the staff is that the teaching of English will be more purposeful if done in connection with situations where there are definite needs for oral and written expression rather than in the more artificial situation of the English class. The staff believes that the activities can be more integrative in character if not compartmentalized as formerly.
10. Mrs. Green believes that true creativeness is a quality that only a very few people possess and that for the great majority of persons the best that can be hoped for is to develop the ability to appreciate the creative productions of the great artists, writers, and composers.
11. George is a fourteen-year-old boy of rather low academic ability who already has repeated the sixth grade, but who still is unable to work beginning seventh-grade arithmetic problems or read seventh-grade books with understanding. The staff decides that he should be passed to the seventh grade on the assumption that he will learn considerable by sitting in the seventh-grade class and trying to do the work of that grade. The seventh-grade teacher believes that even though

he probably won't be able to do the assigned work of the grade, he will learn a great deal from listening to the others who can do the work.

12. The high-school faculty of school *X* is discussing the problem of maintaining high standards of grading. Mr. Milton, a social-studies teacher, contends that if grades have to be used to force students to work up to their levels of ability, there must be something wrong with the curriculum or the teaching, and that they had better examine these rather than try to tighten up on grading.
13. Miss Borden teaches a fifth-grade class in a city school. She is convinced that no matter how effectively she plans the introduction of new work she is bound to fail to get some of the children really interested, and that she must continually be on the alert to find different ways and means of doing things in the hope that ultimately she will get most, if not all, really interested in the learning activities of the day and week.
14. Mr. Morgan believes that a considerable number of problems requiring advanced mathematical thinking should be introduced into the ninth-grade general science, as he is convinced that all children should be forced into difficult mental tasks in order that their minds can be trained to meet and solve the more difficult problems of life.
15. In developing an understanding of the "Principles of Supply and Demand" in a senior class studying economic problems, Mr. Taylor first teaches the principles involved and insists that the members of the class learn them. He then illustrates how the principles operate and has the members of the class try to apply them in reading about present economic problems. Miss Wolter, who teaches another section of the senior class, stimulates her class to study prices in stores and on the livestock and grain markets over a period of time in the hope that they will formulate their own principles as a result of their study. As a general rule, Miss Wolter's approach is to be recommended over that of Mr. Taylor.

16. The county superintendent of County *X* has issued a directive that no child shall be passed from the first grade until he has demonstrated the ability to read beginning second-grade materials, but with the understanding that no child will be required to repeat the first grade more than once. Mr. Wilson, principal of one of the rural consolidated schools, protests the directive at a county administrative meeting on the grounds that failing children because they cannot make normal progress in reading is detrimental to the mental health of the child. He is upheld by enough others to cause the ruling to be rescinded.
17. A speaker at a state convention of teachers, in discussing dangerous trends in American education, pointed out that educaiton is getting too soft to really develop old-time American initiative. He called attention to the fact that many schools are trying to keep children from failing, while in life success goes to the one who has learned to make the most of every advantage to succeed in his chosen business or profession, and that children must learn how to compete without present-day pampering. Life outside of the school, he points out, isn't that way. Success comes through strength and initiative, not through help from others.
18. Martin wants badly to earn a letter in athletics, but physically just isn't able to make the first teams as the competition is too great for him. His adviser encourages him to try out for the school play, which he does, and wins considerable praise from his classmates for his performance. Normally this experience should enhance Martin's social prestige and make him feel more secure as a member of his social group.
19. Our present inability to find satisfactory solutions to the problems of racial prejudice and labor-management relations is evidence of a considerable degree of social disintegration within the United States.
20. Personal integration is a constant characteristic, so that a person who leaves high school as a well-integrated personality is,

by reason of that fact, almost sure to remain so throughout life.

21. Mr. Phillips, speaking at an educational meeting in 1948, urges teachers to be extremely wary about accepting statements that Western European and Chinese societies are in a serious state of disintegration. He says that most of such talk is pure propaganda by forces which want to commit the United States to a program of "stop communism" and is mostly based upon misinformation as to the actual condition of these peoples.

Index

A

Abilities, individual, 165–176
  integration of, 180–183
  special, 174–176
Ability, general, 170–174
  grouping, 208–210, 290
  musical, 175
Absolute standards of achievement, 241–242
Acceptance of failure, 273–275
Achievement, absolute standards of, 241–242
  comparing actual and potential, 243
  determining possible levels of, 194–195
  measurement of, 200–204
  measures standardized, 206
  relative standards of, 242
Act, emotional, as savage behavior, 63–64
Activities, core, 134
Activity, basis of organic, 7–32
  child, as innately good, 123–124
  differentiated patterns of, 45–47
  effect of emotion on, 58–73
  initiated by felt desire, 80–81
  nature of organic, 8–12
Adjusting, of curriculum to learner, 192–194
  of learning to level of maturation, 204–210
Adjustment, emotional, 34–51
  making novel, 24
  measurement of social, 198–200
  mechanisms, 265–279
  and mental health, 297
  prestige, 297
  security, 297
  social, 34–51, 297
  success, 297
Adjustment inventories, 258
Adrenal medulla, 13
Adrenin, 13–14
  function of, 59–61
Aesthetic appreciation, 89–90
Agencies, profit, as educational helps, 49–50
  social, as educational helps, 49
Ages, drill, 4
  mental, within class group, 192
Aids, audio-visual, 289
Aims, changing concept of, 1–2
  evaluating (*see* Goals)
  group, 252
Alternatives, choosing between, 82–85
Anger, 63
Antisocial behavior, 179–180
Appraisal (*see* Evaluation)
Appreciation, of art, 89–90
  of music, 89–90
Approval, 239
  (*See also* Prestige)

Aptitudes, measurement of, 198–199
tests standardized, 206
(*See also* Special abilities)
Arc, reflex, 22
Art appreciation, 89–90
Association, subconscious, 66–67
Associations, parent-teacher, as educational helps, 48–49
Attitudes, and emotion, 129–130
inventories, 258
measurement of, 199–200
Audio-visual aids, 289
Autonomic nervous system, 61
Average, fluctuations from, 167–170
as statistical concept, 166–167
Average child, concept of, 166–170

B

Basic needs, listed, 16
satisfaction of, 19, 81–82
Basic nutrients, 15
Basic organic drives, 81–82
Basic psychological concepts, 1
Behavior, as affected by experience, 70–72
antisocial, 179–180
choice of, 83–85
classroom, 5–6, 147
cortical control over, 69
covert, 41
differential, 20, 45–47
effects of excitement on, 62–67
group, 154–157, 300–301
meaningful, motivation required for, 218–220
not teleological, 70
overt, 41
patterns as integrated responses, 25
reflex, 21–23
Behavior, rooted in complex forms of adjustment, 48
Behaviorism, 2
Biological basis of mental ability, 171–174
Block, emotional, 69
Bodily changes in emotions, 59–61

C

Capacity, for intelligence not a unitary quality, 173
learning, difference in, 192–194
Carbohydrates as basic nutrient, 15
Case histories, use in an evaluation program, 258
Catharsis, 86
Character formation (*see* Social needs)
Child, attitudes of, 129–130, 258
as creative organism, 292–293
emotional development of, 58–73
mental health of, 297
normal, 100–102
personality, 41–45
physical growth of, 142–143
physically handicapped, 99–100
social development of, 34–51
Child development, philosophy of, 50
Child interest, doctrine of, 124
Choosing between alternatives, 82–85
Chronaxie of fibers, 22
Civic organizations as educational helps, 49
Classroom, discipline, 5–6
of progressive school, 147
of traditional school, 147
Classroom organization, democratic, 3

Community influence, 48–51
Compensation, in social relations, 95–96, 276–277
Competition, 243–249
Competitive grading systems, 241
Concept, of intelligence, relative, 174
  of measurement, 195–196
  of self, expanding, 41–45
Concepts, of average child, 166–170
  basic psychological, 1
Conceptual learning, 5
Conditioned responses, 19–23
Conflicts, 60–73
Congenital factors, 171–174
Contract, plan of grading, 243
Control of emotion, 64–67
Conventional school, discipline in, 222–224
Cooperation between school and home, 48
Core, activities, 134
  curriculum, composition of, 134
  experience, 158
Creativity, developing, 292–293
Cumulative records, 257–258
Curricular organization, basic principles of, 93–94, 192–195
Curriculum, adjusting to learner, 192–194
  basic principles of organizing, 93–94, 192–195
  core, composition of, 134
  as experience, 157–158
  geared to living, 300–301
  standardized, 167
  as static body of information, 224
  traditional, objection to, 114–116
  as undergoing change, 1

D

Daydreaming, 96
Daydreams, 270
Defense mechanisms, 94–97
Defiance, 275–279
Delinquency, juvenile, 95
Democratic classroom organization, 3
Desire, felt, activity based upon, 80–81
Development, of individual personalities, 264–265
  integrative, 154–157, 299–301
  of interests, 88–91
  philosophy of child, 50
Diagnostic tests, 196, 203–204
Dietary requirements, 16
Differences, individual, 157
    in ability to learn, 289–290
    in quantity of energy available, 46–47
    in reaction to specific situations, 36
  trait, 157, 290
    in ability to learn, 290
Differential behavior, 20
Differentiated activity patterns, 45–47
Discipline, classroom, 5–6
  in conventional school, 222–224
  external effects upon child, 222–223
  external effects upon teacher, 224
  self-discipline, 225–231
Disequilibrium, caused by hunger, 20
Disintegrated, personality, 44
Disruptive emotion, 72
Doctrine of child interest, 124
Drill, 4

Drill, ages, 4
effect of, 86–87
Drives, basic organic, 82
in relation to behavior, 45–46

E

Education, conceived as conditioning, 2
conceived as directing inner drives, 3
conceived as experiences, 102–103
evaluation of, 251–252
guidance concept of, 124–127, 300
Educational evaluation, 192–203
Educational points of view, 112–113
Educational psychology, why study, 1–2
Educational traditionalism, 113–122
Effect, of drill, 86–87
of repetition, 86
Effects, experimental, 47–51
of failure, 95–103
Ego, expansion of, 41
Emotion, and attitude, 129–130
blocking of, 69
bodily changes in, 59–61
control of, 64–67
creation of, 69
disruptive, 72
effect of activity on, 58–73
modification of, 67
organic mechanism of, 59–61
Emotional acts, as savage behavior, 63–64
Emotional adjustment, 34–51
Emotional blocking, 69
Emotional reaction, intensity of, 67–73
Emotional release of energy, control of, 67–68
Endocrine glands, 13–14
Energy, control of emotional release of, 67–68
effect upon activity of infant, 62
how stored and used, 13–18
material for, 13
Environment, 146–148
as psychological term, 36–40
responding to, 35–40
teacher as pupil's psychological, 298–299
Escape from reality, 269–275
"Essentialists" and "progressives" contrasted, 6
Established modes of response, 25
Evaluation, adequate, characteristics of, 249
of curriculum and pupil, 239–240
of effect of setting goals, 124–126
and improvement of learning, 253–255
self-evaluation, 252
Evaluation program, adjusted to individual, 251–252
all-inclusive in scope, 251
must stimulate self-motivation, 253
Examinations, physical, 258
Excess tension, 68
Excitement, effect upon behavior, 62–67
Exercise, physical and mental, 148–149
Experience, core, 158
educational, 102–103
effect upon behavior, 70–72
guiding pupil, 112–135
previous, depended upon for responses, 47–48

Experience of success, 80–82
Experience type of curriculum, 157–158
Experiential effects, 47–51
Exploration, random, 24
Extraneous motivation, 246
Extraneous rewards, 113–114

F

Failure, effect of, 91–103
  refusing to admit, 94–97
  and success, 238–239
Family influence, 41, 48–51
Fantasies, as escape mechanism, 269–275
Fatigue and rest, 150
Fats as basic nutrient, 15
Fear, development of, 66
Fluctuations from average, 167–170
Food, adequate, 149
  selection of kinds and amount by infant, 20
Forming character (*see* Social needs)
Forming habits, 85–88
Frustration, 265–267
Function and structure, 171
Functional play, 143–146
Furniture, school, 146–148

G

General ability, 170–174
General intelligence (*see* Intelligence)
Generalization, as basis of transfer, 296
Glands, adrenal, 61
  endocrine, 13–14
Glucose, production and release of, 14
Glycogen, manufacture of, 59
Goals, evaluating desirability of, 124–125
  group, 252
  subject-matter-mastery, 50
  (*See also* Aims)
Grading, comparative, as criterion of success, 243–249
  contract plan of, 243
  honor system of, 249
  as process of assigning marks, 241–245
  systems, 241–243
Group behavior, 154–157, 300–301
Group goals, 252
Grouping by ability, 208–210, 290
Growth process, as learning, 291–292
  records of physical, 250, 257–258
  structural, 142–143
Guidance, as concept of education, 300
  as teaching, 124–127
Guiding pupil experience, 112–135
Gymnastic exercise, 148

H

Habit, 19
Habits, desirable, forming, 85–88
  purpose of developing, 87–88
Health, mental, 297
  physical, 150
Heredity, as factor in development, 171–174
Home and school cooperation, 48
Home influence, 41, 48–51
Homogeneous grouping, 209–210
Honor system of grading, 249
Hormonal secretions, purpose of, 59–60

Human drives (*see* Drives)
Hunger drives, 20
(*See also* Drives)
Hypothalamus, 60, 61, 72

I

Ideational images, 24
Impulse, propagation of, 22
Inadequacies, inevitable adjusting to, 97–99
Inadequate responses, 25
Individual, relation of, to society, 133–135
Individual abilities, 165–176
Individual adjustment (*see* Adjustment)
Individual differences, 157
in ability to learn, 289
providing for, 157–158, 289
in quantity of energy available, 46–47
in reaction to specific situations, 36
in reading, 174
Individuality, 157–158
Individualizing instruction, 157–158
Information on child needs, reliable sources of, 49
Inheritance, biological, 171–174
Instinct, concept of, 17
Instruction, individualizing, 157–158
Integration, of abilities, 180–183
essential to development of individual and society, 299–301
in learning, 154–157
of social needs, 34–51
Integrative needs, 44–45
Intelligence, capacity for, not a unitary quality, 173
demonstrated in concrete situations, 174
nature of, 170
as potential, 172–173
as relative concept, 174
tests of, 196–198
standardized, 206
Interest, child, developing, 88–91,
doctrine of, 124
Inventories, adjustment, 257–258
attitude, 257–258

J

Juvenile delinquency, 95

L

Laws of learning, 3–4
Learner, changing concepts of, 1–2
as goal-seeking organism, 294–295
motivation of, 295–296
Learning, conceptual, 5
differences in capacity for, 192–194
effective in problem-solving situations, 293–294
as growth process, 291–292
guidance of, 300
integration in, 154–157
laws of, 3–4
motivation of, 295–296
plateau, 102
purposive, 87
qualities of, 297–298
to satisfy needs, 19–23
Learning situations, adjusting to level of maturation, 204–210

Learning situations improved by evaluation, 253–255
Lunches, school subsidizing of, 149

M

Marks, school, 241–245
Maturation, adjusting to levels of, 204–210
Meaningful behavior, motivation required for, 218–220
Measurement, of achievement, 200–204
of aptitudes, 198–199
concept of, 195–196
of intelligence, 196–198
Mechanisms, adjustment, 265–279
defense, 94–97
Medulla, adrenal, 13
Mental ability, biological basis of, 171–174
differences in, 289–290
Mental ages, within class group, 192
Mental health, 297
Mental tests, 196–198
Metabolism, 13, 17–18, 59–61
Modern society, teacher's understanding of, 131–133
Modern teaching, requirements for, 127–135
Moisture, as basic organic need, 14
Motion pictures, 49–50
Motivation, extrinsic, 246
of learner, 295–296
requirements for meaningful behavior, 218–220
types of, 220–222
Motives, as representative of basic organic needs, 45–46
as representative of social needs, 265–279
Motor ability, differences in, 45
Movements, random, 19
Music appreciation, 89–90
Musical ability, 175

N

Nail biting, 86
Nature of intelligence, 170
Need, basic, satisfaction of, 83
felt, activity based upon, 80–81
Needs, of child, reliable sources of information on, 49
four basic, 14
general, providing for, 140–163
integration of social, 34–51
integrative, 44–45
learning to satisfy, 19–23
meeting social, 151–158
nutrition, 15
organic, 12–18, 141–146
in relation to classroom work, 51
special, based upon deviations, 176–180
Nervous system, autonomic, 61
Normal child, 100–102
Novel situations, response to, 24–26
Nutrients, basic, 15
Nutrition, adequate, 149

O

Objectives, educational (*see* Goals)
Observational records, 258
Organic activity, basis of, 7–32
nature of, 8–12
Organic drives, basic, 82
Organic mechanism of emotion, 59–61

Organic needs, 12–18, 141–146
four basic, 14
provided for, 146–150
in relation to classroom work, 51
Organism, of learner as goal-seeking individual, 294–295
of child as creative individual, 292–293
Organization, curricular, basic principles of, 93–94, 192–195
Oxidation, 14
Oxygen as basic organic need, 14

P

Parent education, 48
Parent-teacher associations as educational helps, 48–49
Persona, 42
Personalities, developing individual, 264–265
Personality, 41–45
disintegrated or split, 44
as impression made upon others, 41–42
range of, 43–44
Personality adjustment, 264–280
Philosophy of child development, 50
Physical changes in emotions, 59–61
Physical examinations, 258
Physical growth, 142–143
Physical health, 150
Physical skills, mastery of, 88
Physically handicapped child, 99–100
Pictures, motion, 49–50
Plateau of learning, 102
Play, functional, 143–146
pure, 142–143
Posture, 148
Potential intelligence, 172–173
Prestige and mental health, 297
Problem-solving situations, learning in, 293–294
Profit agencies as educational helps, 49–50
Progressive and traditional schools, contrasted, 114–122
Progressive school, classroom of, 147
Progressivism, extreme, 122–124
Projection, 278–279
Propagation of impulse, 22
Proteins as basic nutrient, 15
Psychological effects of failure, 245
Psychological environment, 36–40
Psychological principles, implication for teaching, 287–307
Psychology and classroom teacher, 1–6
Punishments, 113–114
Pupil growth, reporting to parents by pupils, 256–257
reporting to parents by teacher, 255–257
Pure play, 142
Purposeless tasks, effect upon learner, 87

R

Random diffuse responses, 24
Random exploration, 24
Random movements, 19
Range, in ability to learn, 289
in quantity of energy available, 46–47
in reaction to specific situations, 36
Rationalization, 94–95, 277–278
Reaction, emotional, intensity of, 67–73
Reading, methods of teaching, 115–116
for pleasure, 89

Readjustive behavior, rooted in simple forms of behavior, 48
Recognition, urge for, 152–154
Records, cumulative, 257–258
  of physical growth, 250, 257–258
Reflex arc, 22
Reflex behavior, 21–23
Reflex tendencies, 22–23
Reflexive reactions, modification of, 23
Reflexive tendencies, conflict between, 23
Rejection, 268–273
Relation of individual to society, 133–135
Relative standards of achievement, 241–242
Release of emotional energy, 67–68
Repetition, effect of, 86
Reporting pupil growth to parents, by pupils, 256–257
  by teacher, 255–257
Repression, 268–269
Requirements, dietary, 16
  for modern teaching, 127–135
Responding to environment, 35–40
Responses, conditioned, 19–23
  established modes of, 25
  inadequate, 24
  as integrated behavior patterns, 25
  random diffuse, 24
  symbolic, 24
Responsibility of teacher for personality adjustment, 279–280
Rest and fatigue, 150
Rewards, extraneous, 113–114

S

Satisfaction of basic needs, 83
School, conventional, discipline in, 222–224
School and home cooperation, 48
School environment, 146–148
School lunches, subsidizing, 149
School marks, 241–245
Security, 38, 151–152
  the child's social, 38–39
  and mental health, 297
Self, concept of expanding, 41–45
  evaluation of, 252
Self-discipline, 225–231
Sensitivity, threshold of, 22
Simple reflex, 22
Situations, making the most of, 99–102
    by normal child, 100–102
    by physically handicapped child, 99–100
  meeting new, 24–26
  novel, 24–26
Smoking, 86
Social adjustments, 34–51, 297
  and attitudes, measurement of, 199–200
    (*See also* Personality adjustments)
Social agencies, as educational helps, 49
Social needs, integration of, 34–51
Society, modern teacher's understanding of, 131–133
  relation of individual to, 133–135
Special abilities, 174–176
Special aptitudes, measurement of, 198–200
Special needs based upon deviations, 176–180
Split personality, 44
Standardized curriculum, 167
Standardized tests, 206, 258
Standards of achievement, absolute, 241–242
  relative, 242

Statistical concept of average, 166–167
Stimuli, changing response to, 19
  in relation to intraorganic and extraorganic forces, 8–12
Structural growth, 141
Structure and function, 171
Subconscious associations, 66–67
Subject-matter-mastery goals, 50
Sublimation, 82–83
Subsidizing school lunches, 149
Success, criteria of, 237–262
  effects of, 80–91
  experience of, 80–82
  and failure, 238–239
  and mental health, 297
Symbolic responses, 24

T

Tantrums, temper, 63
Tasks, purposeless, effect upon learning, 87
Teacher, as part of pupil's psychological environment, 298–299
  responsibility for personality adjustment, 279–280
Teaching, as guidance, 124–127
  implications of psychological principles for, 287–307
  modern requirements for, 127–135
Teaching requirements, understanding of attitudes and emotions, 129–130
  understanding of biological needs, 127–128
  understanding of learning processes, 128–129
  understanding of social needs, 127–128
  understanding of society, 131–135
Teleology not implied in behavior, 70
Temper tantrums, 63
Temperature as basic organic need, 14
Tendencies, reflex, 22–23
Tension, excess, 68
Tests, of achievement, 200–203
  of adjustment and attitude, 192–200
  diagnostic, 196, 203–204
  of intelligence, 196–198
  of special aptitudes, 198–199
  standardized, 258
Threshold of sensitivity, 22
Traditional and progressive school contrasted, 114–122
Traditional curriculum, objection to, 114–116
Traditional school, classroom of, 147
Traditionalism, educational, 113–122
Trait differences, 157, 290
  in distinction from individual differences, 157
Transfer in problem-solving situations, 296
Types of motivation, 220–222

V

Variability, individual (*see* Individual differences)
  trait, 157, 290
Ventilation, 146
Vitamins, 16

W

Will power, concept of, 83–84
Window space, 146