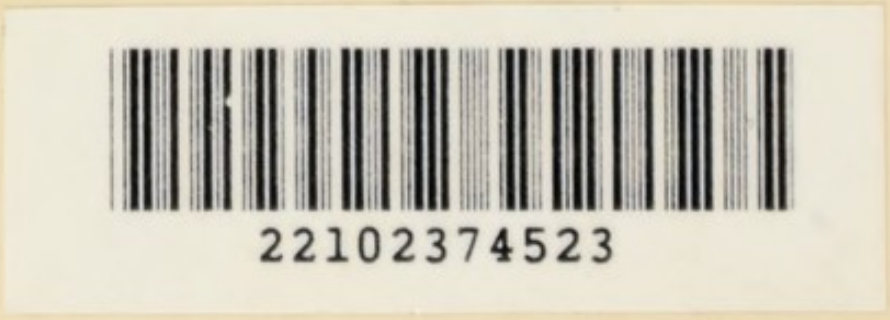
Creative re-education / by Frederick Peterson.

CREATIVE RE-EDUCATION

FREDERICK PETERSON, M.D.



CREATIVE RE-EDUCATION

By the Same Author

PETERSON AND HAINES TEXTBOOK OF LEGAL MEDICINE AND TOXICOLOGY. Two Volumes.

HOFMANN AND PETERSON ATLAS OF LEGAL MEDICINE. Translated from German.

CHURCH AND PETERSON TEXTBOOK OF NERVOUS AND MENTAL DISEASES. One Volume. Nine editions.

IN THE SHADE OF YGDRASIL.

CHINESE LYRICS. Published in Shanghai.

CREATIVE RE-EDUCATION.

CREATIVE RE-EDUCATION

BY

FREDERICK PETERSON
M.D., PH.D., LL.D. (UNIV. PA.)

Formerly Professor of Psychiatry, Columbia University,
One of the Founders of the Craig Colony for Epileptics,
Trustee of the Ridgefield Preparatory School
for Boys, Ridgefield, Conn.

The root of the empire is in the State. The root of the State is in the family. The root of the family is in the individual. As for the people—encourage them; lead them on; rectify them; straighten them; help them; give them wings!

—MENCIUS (4th Century B.C.)

G. P. PUTNAM'S SONS
NEW YORK
1936

PRINTED IN THE UNITED STATES OF AMERICA

This Little Book
Is Dedicated to

ANTOINETTE ROTAN PETERSON

"Steel true and blade straight"

in whose house the Child Health Organization of America was founded and whose small books

The Child Health Alphabet

(translated into French, Portuguese and Czecho-Slovakian) with over seven million copies issued

Everychild
(a second Child Health Alphabet)

The Rhymes of Cho-Cho's Grandma

Songs of Health and Joy

have contributed in no small measure to Health Education in America and other countries.

PREFACE

Most of the normal functions of the bodily organs were discovered by physicians studying such diseases or defects as modified or suppressed the functions of these organs. The localization of certain functions of the brain, such as motion, sensation, sight, hearing, smell and speech has been chiefly brought about in the same manner through investigation of diseases, defects and injuries of the brain. Thus doctors have been able to locate the higher intellectual centers in the anterior lobes of the cerebrum. It is also true of psychology that most of what we know of normal mental functions has been derived from study of disorders of the mind. Education being "the systematic development and cultivation of the mind and other natural powers, and the direction of the feelings, the tastes, and the manners, by inculcation, example, experience, and impression," it is quite possible that here too physicians may, from time to time, contribute something of value to educational systems by observations connected with apparent defects and disorders of these systems. Indeed, physicians have done this. Dr. Edward Seguin and Dr. Montessori are examples. Training in any science is good preparation for an educator.

While biology would be best, other sciences—like chemistry, can produce greatness in this field. Charles W. Eliot was a young chemist who became one of our foremost educators as President of Harvard for nearly forty years. The present head of Stanford University, Dr. Wilbur, was for years a practicing physician, William James graduated as a physician and was professor of anatomy and physiology at Harvard before he became famous as psychologist and educator.

Most of my own professional life has been spent in what I call "re-education out of invalidism." Such processes involves not only "Sweeping the Cobwebs" out of the brain, as Dr. Lillien Martin has recently called it, but also a kind of reconstruction of personality through seeking and discovering latent or dormant capacities which most people have but do not know they have, and which, when uncovered, create a new life of contentment, of self-expression, of absorbing interest. Our methods of education do not educe these capacities, but in my opinion tend rather to bury them still deeper in the graveyard of lost talents.

I have therefore chosen for this little book the title, CREATIVE RE-EDUCATION.

FREDERICK PETERSON.

555 PARK AVENUE,
NEW YORK, N. Y.

CACTUS

You might have been a tree in a more gracious land,
But deserts overwhelmed you with their hot blown sand.
Ages of thirst have made you what you are—
Grossly misshapen, odd, grotesque, bizarre.

You lift your naked stumps to an unseeing sky,
Symbol of frustration, importunately—
Yet sometimes even you recall some ancient power
When from your warped torso springs the splendor of a flower.

F. P.

INTRODUCTION

EDUCATION began hundreds of millions of years ago with the emergence of the first nerve cells and the beginnings of primordial mental life. Some Will to Consciousness, some Divine Breath, some Unknowable Creator was the Great Educator that educed from those tiny potentialities the Frontal Lobes of the brain.

The First Teacher put all the animal world to school, trained them how to swim, creep, fly, walk and taught them how to feel, taste, smell, hear and see. She gave nearly all of them simple mental faculties like memory, most of the emotions, intelligence, will, instincts, some degree of reason, the possibility of progress from generation to generation, and some degree of intercommunication. In time, she eliminated many of her backward pupils and began to show especial favor to the bright and gifted.

In fact, her school became one of Experimental Education.

The pupils were swimming in the sea, flying through the air, crawling on the ground or walking on all fours with hoofs, or paws, and with their eyes to the ground. Every kind of experiment with body and mind was performed, by

trial and error, by a prodigious amount of fumbling toward success and unsuccess. Little variations took place from time to time, mysteriously determined sports among the countless generations, advantageous sometimes, oftener fatal, adjustments that favored progress or that led to disaster. During those long æons some four-footed creature, probably with paws since they were more plastic than hoofs, reached up to the trees under the guidance of the Ancient Teacher, and after ages of arboreal training developed hands as well as feet, hands so definite a help to those early Frontal Lobes, that she gave him for a time four hands instead of four paws. But our quadrumanous cousins were mistakenly oversupplied with hands, and it proved better in the end to do with only two hands and to evolve the hind paws into feet more suitable for an easy quick gait and an erect posture. The blind invisible Educator had at last educed man; and though she has never as yet given up her calling, she turned some of the work over to the forebrain and consciousness of this new creature, her aptest and most gifted pupil, no doubt considerably before the Mousterian period three hundred millenniums ago. The little pre-Mousterian boys and girls were schooled by their fathers and mothers, through imitation, suggestion and parental direction in whatever rudimentary household duties, methods of getting food,

means of defense, handicrafts were in existence at that date.

Those small hands, fumbling with everything, handling and feeling and sizing up the multitude of things about them, became the main feature of distinction between man and the inferior animals and the chief factor in the farther evolution of intelligence and the frontal lobes. Curiosity and interest, present to some degree in the whole animal world, made surprising strides in these new fledglings, and helped to hasten the progress of creative development. Curiosity and hands made man what he is today.

Accidents happened, no doubt; sports, favoring variations or departures from the average norm of creatures and events, apparently undetermined to us who undergo them, but in time the frontal lobes and curiosity and hands made discoveries.

Fumbling with stones led to their use as primitive tools and missiles. Even the wild monkeys in the islands of South Borneo use stones from the beach to crack open the oysters they find at low tide.

Köhler and Yerkes have shown us how the monkeys will make use of boxes and poles to get a suspended banana, or even break off a branch of a small tree to obtain an implement for a purpose.

Some fumbling with a pointed stick revealed

in time the value of a point for defense or offense. Thus came the earliest tools and likewise in time fire and all that these imply from then to now and hereafter.

In time a sort of conscious education began, at first doubtless in the form of training the young people singly or in groups for initiations into tribal rites and ceremonies and coöperation in the chase, in assault and in defense; first steps in the direction of schools.

But man is *in* Nature; and as man and his mind evolved throughout the ages, so all that he is and has become, himself, his social heritage, his systems of education, his arts, his governments, his religions, his commerce, have been slowly evolving, emerging, more and more consciously, but in the same lumbering, fumbling way, age after age, urged by that creative divine Immanence that we call Nature still working in him as it did through all that long ascent from the primordial protoplasm.

The Greeks and Romans had the idea of three fates governing mankind: the Erinnyes and the Parcæ, and the Norse mythology also conceived of three fates ruling our destinies, the Norns. We of this later age can also describe three fates as concerned in the evolution of all organic life, fauna and flora.

The first presides over our physical destinies: accidents, injuries, disasters, diseases, congenital or acquired defects, death and the like.

The second is the long line of ghosts of our ancestors pushing us this way or that, filling us with dynamic trends to one direction or another.

The third is the milieu in which we are born, the racial environment, with its rites, ceremonies, customs, language, dress, religions, and, above all, the type of education fostered in our particular ecology.

With these three fates forever behind us and in us and around us, how much self-determination is possible with us? The Elders thrust their racial heritage upon the younger generation and mold it as they will. Spinoza says we think we are free because we are unconscious of the causes of our actions. How much free will there may be we do not know and never may know. We may believe as we like about the unknown. But though we are shackled, imprisoned, shaped by these three rulers of our destinies to a degree, yet, perhaps—we are free within the limits prescribed by them.

The earliest and perhaps the best of conscious human education was in the innumerable occupations in the nomad camps, in the caves, and in permanent home life as the tribes adopted more fixed habitations.

One can imagine the manifold primitive industries, the crude fashioning of flints and bones and sticks and poles, vines made into ropes, grass into coverings, the quest of water, fruits,

seeds, nuts, meats, the details of the chase, flights from danger, means of attack and protection, and how the children by imitation and direction of the elders grew wise in all their senses and by doing and handling with their hands acquired an education for life such as life was to them. Intercommunication by gesture and clicks and emotional sounds of irritation, pleasure, alarm, gradually evolved into a primordial speech. Even our distant relations, the great apes, have practically the same structures for articulate speech as we, and the chimpanzee especially seems to be able to utter consonantal as well as vowel sounds.

Professor Osborn feels that the education of the cave children was in many ways superior to our modern education. "The Stone Age boys of the river drifts and of the caves enjoyed the best of schooling and had advantages that most modern boys have been deprived of." He believes that in Western Europe forty or fifty thousand years ago there lived men of intelligence as great as, or greater than, our own of this day and age.

Many people are inclined to confuse intelligence with education. Perhaps the most intelligent race in the world today is the Chinese, yet very few of them can read or write or cipher. This intelligence has come through observation, imitation, native ability to reflect and judge and create, and a marvelous technique in

the use of the hands developed through ages of craftsmanship.

Now that homes no longer give the fine schooling of the ancient men in all that has to do with educating boys and girls for life's work, (and this is especially true of city children,) we are compelled to look to the schools more and more to carry on an educational plan in conformity with that of nature in her development of creative intelligence.

CONTENTS

CREATIVE RE-EDUCATION

I

SCHOOLS OLD AND NEW

AGES ago, primitive conscious education began very humbly as instruction in all those initiations, rites, ceremonies, that had to do with manners and behavior in the presence of a tribal chief, medicine man, priest or sorcerer, or in propitiatory meetings with aliens and conquerors— A very much needed schooling in general deportment in connection with those components of ceremonial rule which Spencer has catalogued under trophies, mutilations, presents, visits, obeisances, forms of address, titles, badges, costumes, class distinctions and fashion.

We have little knowledge of the progress of this conscious schooling from those remote æons down to the dawn of history. We know there were schools of philosophy and astronomy in Egypt, for Plato and other Greeks studied at Heliopolis.

There were schools in early Greece to which boys were taken singly, or possibly at times in groups by slaves known as boy-leaders or pedagogues. These slaves were apparently valets till Roman times when the pedagogues began to do some modest teaching under the magister of the school.

The Greek word *schole,* meaning leisure, was applied to schools when Alexandria became the great center of culture.

Before that, the Greek boys were taken to the grammatistes for some general training in letters, literature, arithmetic, to the citharistes for music and to the pædotribes for wrestling, boxing, jumping, running, throwing the javelin, etc.

The word *grammar* in those days had no such narrow significance as we now ascribe to it, but "included more or less vaguely almost all branches of learning as based on the study of language"—and the phrase *grammar school* carries that connotation down even to the present day. Curiously enough, the word *glamour* has exactly the same derivation from gramma (letter) and its meaning "anything that obscures or deceives vision" seems to embody in the language by some subconscious intuition an invidious suggestion.

In the time of Plato, the Greek boys after their gymnastic training would enter the Academic Schools which developed into somewhat fashionable walking and talking clubs where there were lectures, conversations, dialogues. In later centuries, schools were designated by some of these old Greek names. The general name *Academy* came from Plato's institution; the French *lycée* from Aristotle's school, the Lyceum; and in Germany *gymnasium* was applied to the public schools after the Greek prototype.

Roman education carried on essentially the Greek tradition till the Carolingian revival in the eighth century, when the monastic, palace and bishops' schools were established throughout the Empire in which education was chiefly ecclesiastical.

In the middle ages, the Roman system of education prevailed for the most part. Important among their so-called "liberal arts" was the Trivium (grammar, dialectic, rhetoric.) *Trivium* means meeting place of three roads, and here we encounter another curious unconscious criticism innate in the language in the word *trivial!*

A scholastic revival was brought about by the Crusades, the new trade with the Near East and contact with the Moors in Spain and Arabic literature; but this supplied to education chiefly philosophical and theological matters and dialectic, together with some training in chivalry. As this system lost touch with human life and began to decay, the Renaissance brought in a revival of all the old Greek and Roman literatures, though Latin became the language of learning—so that there was little schooling in the native languages of any of the European countries. One might say that almost all education down to the Eighteenth Century was, like law, founded on precedent and has for us only a sort of paleontological interest. The static condition of education can be imagined when one learns that a grammar of Dionysius of

Alexandria was a school textbook in Europe for practically thirteen centuries.

It was the French Revolution that set man free and led him to see that children should be trained for life's work. Rousseau had much to do with this. And after him, Pestalozzi and Froebel woke the world to the need of studying the nature of the child and the necessity of making an approach to natural methods in education.

Ever since then there has been much stir in the educational world and many trials of new methods despite the tendency of adults to impose their inherited culture on the new generation, and despite conservatism and tradition which make for fossilized conditions in school and university. Many addresses and books have been issued on topics such as education for freedom, education for democracy, education for citizenship, education for a changing civilization, creative education, education for leadership, new schools for old, etc.

The old struggle goes on as to whether to educate for individuality or for service to the community, and as to what methods are best for either or both, if they can be as they ought to be combined in our aims.

Aside from the relatively few and sporadic efforts to change the curricula of schools and universities to meet the needs of life and society of the present day, age-long traditions bear down

on us with all the force of inexorable heredity to keep things as they are and have been since immemorial times.

It has been well said that the clothing of the body originated in decoration, and that the clothing of the mind likewise had its source in ornament. Spencer makes much of the apotheosis of the decorative in education. Veblen speaks of the classics as the most honorific of all learning, serving better than any other body of knowledge "the decorative ends of the leisure class."

In the archæology of the mind we find atavistic vestiges or reminiscences in our institutions of learning of the most ancient schools down through the millenniums to the present day—such as initiations, rites, ceremonies, secret societies, sports, badges or degrees, flags, emblems, caps and gowns, and even saber cuts on the face in certain Continental universities acquired for honorable distinction.

All this is natural. Education has been in process of evolution since the day of our most Ancient Teacher down through all those ages of conscious education to the present time. This evolution has always gone on in a groping, fumbling way seeking right methods by trial and error experiment. So it is quite as normal that we should find in the history of education many archaic features still persisting as to discover in our anatomies vestigial organs such as

a rudimentary tail, ear muscles and a vermiform appendix.

The tremendous urge of the past fifty or one hundred years in our curiosity about the world around us, and our vast increase in scientific understanding of both organic and inorganic nature has led to innovations in every department of human life and even to marked changes in our methods of education, so that we of this generation can see that the old schools which we attended are superseded by newer and better schools for our children. These changes are going on with a geometrical progression, thanks to the curiosity, criticism, doubting and testing of truth of this new time.

The improvement in methods and curricula is most marked in experimental and public schools. The private schools that prepare the wealthier classes for college and university training lag far behind.

II

CERTAIN PRINCIPLES OF EDUCATION

EDUCATION may be considered as the drawing out of the potentialities of an individual, and the word is used in connection with human beings or animals as the dictionaries tell us— Why not with plants also? We do not always know what potentialities are there, except this, that hundreds of millions of years bear down with all the force of heredity on every germ or seed to make it develop into an average or norm of the particular species of creature or plant from which it sprang.

Man's conscious effort and selection have done wonderful things in drawing out the potentialities of some of the flora and fauna of the world, made wild grasses into wheat and corn, transformed a common mountain daisy into multicolored and multiformed chrysanthemums, and the wolf into every variety of dog to meet his needs, watch dog, setter, retriever, poodle, police dog, great Dane, Newfoundland, dachs, spaniel, terrier and the like, taking advantage of sports and variations, but the potentialities were there. Man did not pour anything new into these molds of capacity and form. Sometimes he has stunted or deformed them

when his caprice decreed, as in the grotesque trees dwarfed by the Japanese, the heads malformed with bandages by the Polynesians, the golden lilies of the Chinese, and the bi-section of the liver and general displacement of the abdominal organs by the remembered corset in our Western civilization.

Bad methods in education may dwarf or repress the unfolding mind of a child, while good methods favor the evolution of its potentialities.

The goal must be the development of personality, a fitting for life's work and the fostering of a spirit of coöperation for the common good.

No education can go far wrong in applying a system of teaching based on three fundamental principles of education once enunciated by Ruskin: viz.:

(1) Health of Body
(2) Education in gentleness and justice (character building)
(3) Education for life's work.

Health of body is mentioned first because it is basic. No one would dispute this now. A sound body is accepted by everybody as the very first prerequisite in education. But this is new. Just a few years ago it was learned that seventy-five percent of the twenty-four million school children in the American public schools were suffering from many kinds of remediable physical disorders. In the selective draft of young

men for the war, thirty-eight percent were rejected for physical and mental defects. There was something wrong with the school curricula. There was no adequate supervision of the bodies of the children in the schools and no education in health worthy of mention. Health conditions were even worse in the country schools, the parochial schools and private schools of the country. But in June, 1918, Dr. Holt, Miss Jean and their coworkers established the Child Health Organization of America, and they made it their chief point to introduce Health Education into all schools as a part of the regular curriculum. This was practically done within a few years in this country and through their efforts, the movement spread throughout the world to more than thirty other countries.

I was sent as a delegate to present the views of this Child Health body to the meeting of the National Education Association at Pittsburgh, July 3, 1918, which I did in a paper entitled "The Reconstruction of the Race." In this all the factors and methods that have to do with Child Health and health education were discussed and formulated for the first time in the history of the National Education Association. The founding of this health organization was the beginning of the spread of the great ideas for the future of the human race, that emanated from the minds and hearts of Dr. Holt and Miss Jean and which have gained ever-widening cir-

cles of understanding these past dozen years. Although Dr. Holt died five years after the establishment of the Child Health Organization, the work which he carried on during the five years has gone over the world like flame, and Child Health will be always identified with his name.

The World Federation of Education Associations has established a Health Section and the report of the fourth annual meeting of the Section on Health Education held in Geneva, Switzerland, has recently been published (1930).

And now (1931) comes the University of Pennsylvania with a far-reaching schedule under a Director of Health Service. This organization is to supervise, develop, protect and care for individual health throughout university life; give instruction in health conservation, personal and community hygiene and the forming of wise habits of bodily, mental and social health; supervise the sanitation of the student environment; conduct studies of health problems through research; classify students according to physical and mental surveys, constitutional physiques and capacities; and finally, investigate and supervise all athletic exercises and occupations. This is real progress.

The second fundamental principle mentioned has to do with such moral training as fits one for life in a social order. The old character training was fostered by example and precept

and by religious authority forced on the growing generation by the elders. Authority is nowadays so questioned by rebellious youth that they must seemingly themselves work out an ethic that will meet the necessities of community life. An individual alone on some far island would have a simple problem of ethics, would have a freedom he cannot have in the world of men. Here he must practice altruism. He must learn gentleness and justice, kindness, honesty, truth, deference and coöperation for the common welfare.

It would hardly seem necessary to say that whatever education is undertaken in school, college or university should for the mass of students at least be carried out along lines having to do with living in the world of men. The public schools do this in a limited measure. The preparatory schools do not. The nine most precious years of life in most of our preparatory schools are spent in preparation to "pass examinations." Instead of preparing for life's work, a highly artificial and indeed foolish standard is set and all effort and energy devoted to a kind of mental gymnastics having nothing to do with life. These are the years in which special talents or aptitudes should be discovered and some knowledge of life's meaning, aims and work inculcated. This type of instruction has no real significance to growing youth and is simple drudgery. The only actual interest supplied

is sports, small inter-school sports which prepare for rabid interest later in inter-collegiate sports and a lifetime subsequently devoted to athletic interests only, in a world full of the romance of science, art, literature and great undertakings.

Some thirty percent of the boys who undergo this costly and ineffectual training and who pass the entrance examinations, do not finish the four-year university course. It is said that seventy-five percent of those who graduate from college have not the least idea of what occupation to follow. What a waste of creative possibilities!

Abraham Flexner says—"The university must shelter and develop thinkers, experimenters, inventors, teachers and students." What leagues must be traveled to attain that splendid goal!

It has been attained even without schooling. Benjamin Franklin's life unfolded as "thinker, experimenter, inventor, teacher and student," with only two years of schooling. One wonders whether his genius would have been distorted and repressed by nine years of preparation to pass examinations and four years of molding by our present university activities.

He had curiosity, interest, he used his hands; and his intelligence grew as it fed upon all that his senses perceived and experienced in the world about him. His whole life was an education from infancy to old age. And that is what life is and

ought to be to every one. Schooling is only a little incident in this development but it should follow the natural lines of evolution of the mind, and favor, not arrest progress. It can be made of immense value in supplying the pabulum from which youth will draw its mental food in that self-education which is creative and the natural method of mind growth.

III

WHAT SCHOOLING SHOULD DO FOR US

WHATEVER methods of education may be employed and these may differ in the various schools and change with time, there are certain lines of learning that have a permanent value and would seem all-important for leading a full life, bringing out what is of most worth to the individual and to the community made up of individuals. These educational needs can be classified in the order of their importance, following with some modification the schemes of Spencer and others. This is what schooling should do for us:

(1) Educate in Personal and Community Health
(2) Train to Earn a Living
(3) Educate in Parenthood
(4) Teach Coöperation in Social Life, Citizenship
(5) Discover and Foster Special Gifts and Aptitudes
(6) Insure the use of the hands
(7) Furnish Esthetic Culture for our Leisure.

While this is the order of their actual importance, all these human needs dovetail into one another, and the complete man should have them all.

The span of life has been notably lengthened by many years in modern times by control of infectious diseases, better living conditions and

improved sanitation. But while the life-span has been lengthened, the health-span is all too brief. One may live to be seventy or more, but the span of good health in that time averages only ten years! Less time than one gives to the machinery of an automobile will insure the proper working of the delicate machinery of the body. It has been authoritatively stated that ten minutes daily of proper health education during the whole of school life would carry over the whole idea of good health as a personal duty and community service not only to all the children in the schools, but through them to the parents and younger children of preschool age. It should be a thorough system of instruction in all matters pertaining to health with special emphasis upon health problems, rather than upon disease, in good physical and mental habits, in personal hygiene, in public health and sanitation, in methods to avoid communicable diseases, in all that relates to nutrition and growth including foods and food values and food habits, and finally in the responsibility of parenthood. For while the bringing up and rearing of children comes third in the suggested classification, that is simply the order of importance in life, since individual health and earning a living are for self-preservation, and the care of offspring is for preserving the race.

But the instruction in general principles relating to parenthood might well be a part of the

curriculum dealing with personal and community health.

"Is it not an astonishing fact, that though on the treatment of offspring depend their lives or deaths, and their moral welfare or ruin, yet not one word of instruction on the treatment of offspring is ever given to those who will hereafter be parents?"

—SPENCER

As the great majority of mankind when through with schooling has to enter upon some gainful occupation, it would seem that the schools should provide in their curricula some general basic instruction that would be of use in any career entered upon later. There should be preparation for life's work. What is life's work? The masses are "employed in the production, preparation and distribution of commodities"—that is, chiefly in agriculture, construction, manufacture, buying and selling, transportation, finance.

The sciences are near to this business of life, mathematics, physics, biology, chemistry, sociology. But grammar, the languages, literature, history, political geography and the like, however good in themselves, seem very remote from the business of life.

It would seem odd that a youth can wake up tomorrow, his 21st birthday, and find himself qualified on that particular date to vote, to be a citizen, yet without ever having learned anything

in all his school life bearing upon the part he is to take in the social, civic and political coöperative life of his country and time. When public education was first promoted, the chief arguments for its establishment were: "for public service," (Franklin); "enlightened opinion on self-government," (Washington); "civic and moral duties," (Adams); "for government," (Madison and Monroe). A little book, "Tomorrow's Americans" recently issued by Bowden and Clarke (1930), puts all the arguments in favor (and the best methods) of teaching social, civic and political responsibilities to the youth of our schools, into a small readable format. Coöperation is emphasized. Coöperation should be the basis of all social organization, and should be the slogan of the schools. Competition should be relegated to the limbo of past-experience and disaster.

Is there not in every boy and girl some individual gift or aptitude that will fit into the coöperative work of the world?

"The fact is that some new freedom, some new principle of life, some new desire to grow, has for a long time been taking root in the minds and souls of men. The urge to become more creative —to gain more of life and to give more of life— becomes at last intense. . . . In this school we do not believe in suppression. We believe in the creative urge." Sanderson, who wrote this, said that in all his experience with many thou-

sands of boys he had never found a really dull one, one who would not fit into some form of coöperative work and do well his part.

The old schooling has had relation to dominance of the leisure class even down to the present day, and the result has been, learning, not doing, with the result of tragic waste in the development of the potentialities existing in every growing child. The creative urge is repressed by a formalism unrelated to life. Latent talent should be sought for in the school and the school of the future must be so "spacious" as to mirror all the life of the world. It must be a microcosm. It must have such varieties of all the occupations going on in the world about it that it must inevitably awaken interests of one kind or another in the pupils and so bring out the latent trends and callings that exist in each individual. These interests are like little buds about the threshold of consciousness, appearing from time to time, not always present, but ready for flowering at any moment when the conditions are propitious for an efflorescence. These buds may be near the surface at all periods of life, but are more numerous, more ready to bloom, in early youth and adolescence. And this is the time when formalistic education is poured into our youth, instead of a system of drawing out the free potentialities of the young mind, eager to do, to search, to understand, to create. All the old memorizing of abstract matter is drudgery, and in most schools

and universities, the only interest provided for the past two generations at least has been sports. Now and then talents and aptitudes do emerge, despite all the apparent efforts of the school to repress them.

The need to use the hands already alluded to as so important to the evolution of the frontal lobes, the seat of intelligence and reason and prophetic insight, should be emphasized. Of course the hands do get a desultory training from infancy up, at home, in the schools, and in the various occupations of everyday life then and later; but the schools should make a special point of further building up the manual technique inherited through the ages.

Finally, after all these real essentials of education have been insured in our system of schooling, good health, gaining a livelihood, fitting for parenthood, fitting for coöperative citizenship, discovering latent and unusual powers of the mind, there remains esthetic culture for the leisure hours of life, the special accomplishments in many fields, literature, the fine arts, languages, the enjoyment of nature, and so on. While these should be subordinated to the basic needs, they have a high place in the cultural and ornamental field, especially as our leisure hours seem to be gradually increasing in this otherwise workaday world. Education should combine all of these seven principles in helping to upbuild the complete man.

IV

THE HAND

It is said that Anaxagoras, the friend of Pericles and Euripides and inspirer of Aristotle, claimed that the hand is the chief distinguishing feature between man and the lower animals. As we have only a few fragments of his teachings, we do not know how far he went in his thought about the hand.

Sir Charles Bell published one of the Bridgewater Treatises upon "The Hand" in 1833 in which volume he says:

> "With respect to the superiority of man being in his mind, and not merely in the provisions of his body, it is no doubt true—but as we proceed, we shall find how the Hand supplies all instruments, and by its correspondence with the intellect gives him universal dominion."

Dr. Edward Seguin, in his book on "Idiocy" published in 1866, summarized his thirty years of work in what he called physiological education, which he considered not only applicable to defectives, but to all normal children as well. He lay special stress upon the training of the hand as an organ for prehending, handling and modifying material by its aggressive power over the substances to be worked, altering surrounding

bodies into likenesses of some ideal preëxisting in the mind.

He says:

"The hand is the best servant of man; the best instrument of work; the best translator of thoughts; the most skillful hand is yet, in respect to certain realizations, as it were idiotic; our own hand shrivels before we suspect the thousand ideas it might realize."

Of course, Seguin did not train the hand only. His physiological method included all sorts of muscular and sensory development. He insisted on thorough observation of the child as an individual and on the promotion of every spontaneous evidence of potentiality. He began early with drawing. On a visit to English schools, he criticized the teachers as not understanding that rational psychological evolution, first concentrated in the use of the hand, should give precedence to drawing, and drawing should lead to writing, and writing to reading; whereas, the usual order in schools is quite the reverse.

Dr. Montessori, physician, teacher of defectives, and founder of an excellent method to develop normal children, acknowledges her indebtedness to Seguin and his predecessor Itard for much that constitutes the principle of her system.

Seguin wrote:

"When we consider that among men there is not one in a thousand who can use his hands to represent correctly

a meaning . . . we are astonished that the lessons of substantial drawing taught to idiots have not yet been carried into the public schools, where they could fill up the tedious intervals of book-learning."

Tilney, in his book "The Master of Destiny" (1930), describes how the evolution of the primate hand from one to grasp the branch of a tree to one that could hold a sphere illustrates the "actual development in the intellectual grasping powers that became the distinguishing feature of mankind." He tells how "The hand in particular was the instigator, if not the originator of human speech. . . . As the creator of indicative gesture, the hand laid the foundations for the use of symbols, which, when vocalized, became established as language."

Now it may occur to many that while the use of the hand for hundreds of thousands of years has been perhaps the chief factor in the evolution of man and his frontal lobes to date, still this preëminence having been achieved, the hand might be no longer of such supreme service and could be from now on given a subordinate position in the school curricula. This is really far from being the case. Certainly we know that the hand is essential to the masses of mankind who are "engaged in the production, preparation and distribution of commodities." It is foremost in all the arts. What the hand is to the scientist may be attested by Thomas H. Huxley from an

address of whom to a club of handicraftsmen I make some pertinent quotations:

"The fact is, I am, and have been, anytime these thirty years, a man who works with his hands. . . . In truth, anatomy, which is my handicraft, is one of the most difficult kinds of mechanical labour, involving, as it does, not only lightness and dexterity of hand, but sharp eyes and endless patience. . . . The astronomer, the electrician, the chemist, the mineralogist, the botanist, are constantly called upon to perform operations of exceeding delicacy. . . . Mobile and yet steady hands, guided by clear vision, are more and more in request in the workshops of science."

His standards of preparation for work in his own field, and implied for many other departments of life's work, consist of such elementary education as would give command of the common implements of learning, a knowledge of the elements of physical science, especially physics and chemistry, ability to read a scientific treatise in two or three foreign languages, and particularly ability to draw.

"Everybody, or almost everybody, can learn to write; and as writing is a kind of drawing, I suppose that the majority of the people who say they cannot draw, and give copious evidence of the accuracy of their assertion, could draw, after a fashion, if they tried. And that 'after a fashion' would be better than nothing for my purposes."

V

INTEREST AND ENTHUSIASM

A CERTAIN eminent American has been in the habit of saying, from time to time, in a solemn and portentous manner: "I have no use for the imponderable." This despite the fact that his whole life has been actuated by such imponderables as ambition for affluence and power and all the hokum of advertising and salesmanship in which he has been past-master.

Now some of the other imponderables that have had enormous influence in human affairs, when one comes to think about it, are: courage, love, grief, sympathy, health, education creeds, slogans, patriotism, music and other arts—and the mind itself is an imponderable of no small significance in the world of men.

These spiritual powers might well escape the notice of a clerk in a country grocery store whose life is devoted to barter and the distribution of commodities. It would be due to absent-mindedness in the real sense.

Interest and enthusiasm are in this catalogue of the immaterial, unweighable, but extremely potent factors in human conduct.

Enthusiasm originally had a very narrow and restricted meaning, viz.: "divine illumination," to

which in this sense Locke devoted a chapter in his "Essay on the Human Understanding." Nowadays, it indicates a superlative degree of interest in general.

In child or man, interest is innate and also acquired. Interest is a kind of emotional illumination that fixes the attention—for a time. The psychologists call it emotional tone, that accompanies every stimulus of any kind to the senses. In its rudimentary or fundamental form, it is an alertness of the nervous system to every sort of impact upon it, a kind of vigilance, varying in degree according to character or meaning of the stimulus to the organism. An unexpected prick of a pin, loud sound, unpleasant taste or smell, or flash of lightning may excite very strong emotions. But even ordinary stimuli of any kind are accompanied by some emotional tone. This is shown, for instance, in word associations employed with the psycho-galvanic reflex. A delicate mirror galvanometer is connected with a person by means of the two hands placed upon the electrodes through which passes an imperceptible current. The light from the mirror is thrown upon a screen, which magnifies its slightest deflection. Then long lists of ordinary words are repeated aloud to the individual in the circuit. Usually, in a word association test, the person hearing a word is expected to respond as quickly as possible with the first word coming into his mind. But for our present purpose the response

is not necessary. Now it is found that every word spoken causes a slight movement of the mirror, showing an alertness or vigilance (emotional tone) for each and every word stimulus. But, more important still, is that the mirror is deflected directly in proportion to the emotional significance of the word given. For instance, indifferent words such as "brick," "street," "swim," "great," and so on, have only a moderate effect on the galvanometer while significant words like "home," "mother," "friend," cause a stronger movement and pronouncing the name of the person himself will often induce the strongest kind of fluctuation of the galvanometer, because a deeper emotional tone or interest is aroused. The auditory sense lends itself best to this sort of experimental method, but similar tests with sight, taste, touch, smell, show emotional tone as revealed by this use of the galvanometer.

Thus we have this alertness or vigilance in every person, varying as individuals themselves vary in that which makes up personality, endowment, potentiality. This foundation of emotional tone is rudimentary interest. Interest is instinctive to a great degree in every normal person; but, of course, most interests are acquired during development to maturity. It is the function of education to discover innate interests and to create new ones, to increase them, to multiply them.

Long ago it was found that the emotions are rhythmic in their manifestations. Emotional

tone rises and falls like waves and tides. Every one who studies himself notices variations in his feeling of well-being or depression from hour to hour, day to day, or week to week. It is very noticeable in observing children. William James once said "interest comes in beats," and he wanted all teachers to know this and to learn to act upon it; and it is now well known to psychologists who study children that the acquisition of knowledge by them comes in leaps as the rhythmic beats of interest underlying what is said or taught to them stir their intelligence.

Authors and artists have often told us how their minds lie fallow, from time to time, until suddenly one day inspiration comes to them—emotional illumination—and their interest blossoms out in creative works. With them, interest reaches its superlative in enthusiasm.

Furthermore, my experience and observation have shown me interests that might have value in the progress of the race exist in all of us, not only in the young but in the grown-ups—let us say from five to ninety years of age, latent seedlings in the subconscious waiting some happy accident or intent explorer to uncover them and bring them to fruition. They grow for a time in the subconscious, and if not discovered by the possessor himself or some searcher, die down and disappear. Our old methods of education are responsible for colossal losses of creative ability that under more fortunate conditions might have

added much to the happiness of millions and the glory of the world.

These ungarnered talents come near to the surface in all periods of life, not only in the young, but in the adult and even the very old. So they should be sought for and encouraged at every age.

One cannot know beforehand what buried talent may be there or when it may come close enough for discovery. For instance, a little girl brought up for years in contact with music in every form, showed not the slightest interest in music till she was twelve years of age when suddenly a passion for music arose and became the chief interest in her life. A woman at forty-eight, with help from others, discovered in herself a gift for ceramics and became a famous potter so late in life.

I suppose the secret of search and discovery of these hidden abilities would lie in contacts, giving everybody training in general intelligence and the power to use the hand, for the use of the hand enters into most human activities.

Contacts with all that the world is doing is possible in schools like "Oundle," so that for the youth of the race, that sort of school offers a solution.

Some similar efforts at contacts must be formulated for adult education.

VI

OCCUPATION THERAPY

So far as I know, occupation therapy had its inception in the later middle ages with several generations of Spanish monks who were in charge of the insane of that country. Before physicians elsewhere had begun to treat the insane by bleeding, purging, whirling stools and ducking, the Spanish fathers had introduced the so-called "moral treatment" which was chiefly occupation therapy. They met with difficulties in some instances for they said: "We cure almost all our lunatics by this method, except the nobles, who would think themselves dishonored by working with their hands."

Pinel, Leuret, Seguin and others were impressed by the line of treatment inaugurated by the Spanish monks, but their efforts and writings had little effect outside of their own field of work in France, for nearly a hundred years after that I became a physician in one of the best hospitals for the insane in the State of New York, and I doubt if the insane in the Salpetrière were very much worse off before Pinel inducted his reforms than I found them in my new station. To be sure, no chains were used, but there is really not such a great difference between chains and straps,

muffs and strait-jackets. There was not a single occupation, no reading matter, not a single plant or bird, no rugs or comfortable chairs, only benches screwed to the floors and for years no patient ever got out-of-doors, except a few men who were allowed to walk up and down in a small grassless yard with high brick walls. It seemed inconceivable to me that such conditions could exist nearly a century after Pinel. I visited a number of other American asylums in various States, and while physical restraint was beginning to be abolished, occupation therapy had scarcely started. In one of the most progressive asylums with several hundred patients, I found two men making scrubbing brushes and one or two picking hair from old mattresses in a dark basement room. In 1887 I took a three months' vacation from my asylum work to visit most of the Continental hospitals for the insane in Europe and some in England to ascertain what was being done in other countries in the matter of occupation therapy. My article on the subject appeared shortly after my return in the *American Journal of Insanity*. I was particularly impressed with the variety of occupation in the German asylum Alt-Scherbitz near Leipzig and the new asylum at Rome. These included agriculture and gardening and all sorts of arts and crafts. Of course, I made immediate application of these ideas in my own sphere when I returned, and I think the complete transformation of that particular hos-

pital inside of a year had beneficial results. Incidental to the tour abroad, I visited the Colony for Epileptics at Bielefeld in Westphalia and was astounded by the great variety of occupations for these unfortunates successfully established and developed by that man of great vision, Pastor von Bodelschwingh, who was also the founder of the well-known workmen's colonies all over Germany for the rehabilitation through work of tramps and ne'er-do-wells. Because of that visit to Bielefeld I was able to help create the Craig Colony for Epileptics at Sonyea, New York, now in existence for nearly forty years, with two thousand patients, over two thousand acres of land, over a hundred buildings of the cottage type, and occupations of every kind the main principle of the Colony. We have found that physical labor with the hands together with proper diet will, without drugs, reduce the annual number of epileptic seizures by about fifty percent.

With this experience in the value of importance of occupational therapy for the insane and epileptic, it was but a step to make application of the same method to the psychoneuroses, and the World War led to a still greater extension of occupation therapy to every sort of illness begotten by war, shell-shock cases, the halt and the blind and so on.

At this day, occupational therapy holds undisputed sway in hospitals of all kinds and its spread

everywhere, especially in the past twenty years, is inspiring.*

There is another side to this work method of cure which I do not seem to have noted as broached anywhere, but which might bear some thoughtful consideration, and that is the matter of its having a value as a preventive measure. It is often the case that a system of therapy found effective in restoration to health may be an important help in preventing the onset of a disorder. This might be particularly true in such instances as mental disease and the psychoneuroses.

The gospel of work as a part of religious duty has been inculcated for two thousand years in all of our Western civilizations. There are many references to this in the Bible, such as:

Slothfulness casteth into a deep sleep and an idle soul shall suffer hunger (Prov.).

Work with your own hands as we commanded you (Thess.).

If any would not work, neither should he eat (Thess.).

This religious cult of work was naturally taken advantage of by the leaders of the masses all through the ages and put into the curriculum of all our Western instruction. Work is indeed essential not only for livelihood, but also for satis-

* Some thirty-five years ago the first occupation cure for functional nervous disorders in this country was established at Katonah, New York. It is known as the Hillbourne Club and is in charge of Dr. S. T. Armstrong, owner and developer.

faction and content; but much depends upon the kind of work. There is work that is devastating, such as that of the scourged slaves who built the pyramids, of the prisoners who rowed the galleys, of the driven multitudes in mines and factories and sweat-shops. The employers have looked upon these as so many ergs. Such workers have had little emotion in their labors except fear and despair. But it is the emotional interest present in most kinds of work that glorifies it and leads one to feel that the preachers and philosophers are right in estimating it a boon to mankind. Work must have interest. The farmer who does perhaps most of the work of the world has a complex of emotional interest made up of work in the earth itself, closeness to nature, the biological interests in his varied crops and assorted live-stock, the purpose, the planning for the sowing and harvest and not least, the sentiment of success which is always his, except under special conditions of political or climatic disaster. The artisans, builders, carpenter, mason, steel-constructor, painter, have their own net-work of interests to give zest to their work, the love of good workmanship, the purpose and planning, the coöperative bonhomie in big enterprises, and sometimes, an outlet for the spirit of adventure and danger that lurks in most of us. I have rarely seen more expression of joy in work and health and content than among the daring workers in huge steel building construction, on great

engines and ships, skyscrapers and bridges. But it is in creative work in which man seeks to express the soul that is in him that labor becomes an untiring joy. No six hours a day for a man so engaged! Inventors, musicians, writers, artists of all kinds, begrudge the hours for sleep and meals, and are indeed the happiest people of the race. And this creative ability exists in all of us in some degree, hidden and hampered and covered up by the sorry methods of education, and the customs of the life we lead. With the coming of a thirty-hour week of labor as now foreseen, what a new world of leisure and opportunity for everybody will arise! Then everybody will be able to try new things, and by contacts with all that goes on about us in the realms of intelligence, culture, creative work, discover himself and his own capacity for self-expression—the beginning of a new life of the spirit of man!

And when we all grow busy at our labors with interest and enthusiasm, depressions and other mental disorders will be less frequent and neurasthenia, psychasthenia and hysteria will begin to vanish. Occupation therapy will take its place in preventive medicine.

VII

"SANDERSON OF OUNDLE" *

OUNDLE is a village some fifty miles north of Cambridge, England. There was a school there in 709 A.D., according to tradition. As a matter of actual history, the Oundle School was founded in 1485, a few years before the discovery of America. Until 1892, this school was much the same as most of the schools in England and in America up to the present day. It takes almost geological periods to make progress in education. Frederick W. Sanderson became the Headmaster of the Oundle School in 1892 and died in 1922. There had been no change in school methods, during those hundreds of years, until Sanderson's thirty years transformed it. The school has a historical interest for us because relatives of George Washington and of Wingfield (the first president of the Colony of Virginia) attended it. The genius of Sanderson introduced changes in this school, the changes that education ought to show in a rapidly changing world, but which age-long tradition had not permitted till his fighting personality brought change and progress about. This book written by old Oundle boys and by his associates is an effort to describe the man and

* "Sanderson of Oundle," Macmillan Company, New York, 1926.

his work. One of them called him the "Philosopher of Change." He was a dreamer and experimenter, but a cautious experimenter. He never launched into new methods without laborious thought and effort. He made his dreams come true. He had a hard struggle in the first twenty years to bring about any change. He had to fight the traditions of education of centuries of time, and the fossilized ideas of reactionary trustees.

Under Sanderson, the school grew from ninety boys to six hundred. I have visited the school twice. On my last visit about four years ago, his successor told me the school was full; there were two thousand boys on the waiting list and no vacancy till 1935. That year he had certified about one hundred boys for Oxford and about one hundred for Cambridge. His certification, based on years of study and observation of each individual, was sufficient to secure their admission. They did not have to pass exams. It was not necessary to spend a few hours on curious crossword puzzles, in order to get into the university.

Now, what were some of the ideas that this "Philosopher of Change" tried to work out in Oundle? Let me quote a few extracts from some of his addresses:

"The fundamental instinct of life is to create, to make, to discover, to grow, to progress. Every one, in some form or another, has experi-

ence of this joy of creating; the joy of seeing the growth, the building, the change, the coming.

"Every one can see today the immensity of the problems before the world. It does not need much reflection, or foresight, or knowledge, to see that the organization of the intercourse of races is hurrying on to becoming a dangerous problem. As has been said, and as any one I think with powers of sight can see, it is in a large sense a race between education and catastrophe. And the question we in the schools have to ask is, can we in schools be outside all this? Can we confine our work, our play, our necessary work, our necessary play, to the recognized traditional work or play of schools? We here think not. We believe that schools should move on towards becoming always a microcosm of the new world. A microcosm, an experiment, of the standards of value, of the commandments, the statutes and judgments, of the organization, of the visions and aims of a coming world.

"The beginnings are here: and here boys must find themselves in the great stream of true life. They must find themselves in the lands of the great vision, of faith, of service. No beating or marking of time here. No easy static state. No satisfaction with conventional static comfort. Here they will join in this great world life. They came from their homes to join the great world-life here. Even these tiny boys here will feel that

something is before them that matters, something of true life and true intent. . . .

"They will catch the contagion of effort. For learning is not our object here, but doing. They must not learn things in a deadly static way; they may learn much in a static way and gain nothing of life. Not here I hope. No, the germs of life come from the spirit; from the incessant travail of the soul; from high intent; they come from the burning desire to know of the things that are coming into the world.

"The fact is that some new freedom, some new principle of life, some new desire to grow, has for a long time been taking root in the minds and souls of men. The urge to become more creative, to gain more of life and to give more of life, becomes at last intense. And there is an immense desire to satisfy the great urge of nature. The old order passes. The gathered forces seek release.

"In this school we do not believe in suppression. We believe in the creative urge. Our belief is that every one of the boys in the school has a tremendous desire to do something, and to do it well. If things do not seem to go well, and the boy may even seem to be rebellious and bad, our experience is that this seeming idleness and badness is due to unused talent. . . . We must have the stupendous faith that what in the boy seems often so wanton, so rebellious, is only the unsatisfied desire to do good, to make, to create

and give life. This is fundamental to our idea here.

"Individuals are not hard Newtonian molecules. Individuals are like atoms under radium. The life within a man or woman, boy or girl, is the most powerful, vital, complex, energetic thing there is. It cannot be treated as a hard molecule any longer. There are vast stores of energies to be liberated. The scientific work before the world is to coördinate, to harness, the radioactive souls of men, just as we have to harness the energy of the atom. This is the stupendous work for which you boys are to be prepared.

"I believe we want to get away from formal training to think. Boys come to school to do something, and not to learn. Learning will come as a by-product.

"Is the education for dominance and possession to survive? Should not service be the ideal for all schools—creativeness and not possession?"

"Creative education demands that schools should be brought into harmony with the community life. . . . When boys and girls go home from school (even to the humblest home) the parents should find there is something their children have done at school which will help them in their work.

"The change in schools from the outlook of dominance to the outlook of service is fundamental, and will revolutionize schools, and ultimately will revolutionize the social system.

"Schools should be miniature copies of the world.

"There is much said about waste and spending, but the greatest waste goes on unseen and unexpected before you. The greatest waste lies before you—it is the waste and decay of capacities, bodily, mentally, spiritually. We see this waste on all sides—in loss of health, in the unused undeveloped faculties, in the aims of life. It is the most tragic sight to see the neglect of talent—it is the sin against the Holy Ghost. It is the sin which lies before the nation and all its citizens.

"It is the main purpose of schools to give every opportunity for the development of all kinds of talents, and for this purpose a school must be built under the motto of 'Spaciousness.'

"At present schools, and even universities, are largely devoted to what are called brain-developing studies—to what we call tool-sharpening methods. These methods are pursued in classrooms; in languages, in mathematics, in science, and in art. Too often the time is spent in learning these instruments of knowledge, but not in using them. I am pleading for a large share of time to be spent in the application of these instruments to the urgent needs of today."

Mr. H. G. Wells had two boys in the Oundle School and was chairman of the meeting in London when Mr. Sanderson gave his last address (for he died on the platform that evening just at the close of his lecture). Mr. Wells intro-

duced Mr. Sanderson as "one of the most inspiring of living educationalists and one of the very greatest headmasters the world has ever seen." This last address gives a very good summary of the educational ideals of this Philosopher of Change. He said:

"When I became headmaster I began by introducing engineering into the school-applied science. The first effect was that a large number of boys who could not do other things could do that. They began to like their work in the school. They began to like school. That led on to introducing a large number of other sciences, such as agricultural chemistry, horse-shoeing (if that is a science), metallurgical chemistry, biochemistry, agriculture; and, of course, these new sorts of work interested a large number of other boys of a type different from the type interested by the old work, so we got an exceptional number of boys, curiously enough, unexpectedly liking what they had to do in school. Then I ventured to do something daring; it is most daring to introduce the scientific method of finding out the truth—a dangerous thing—by the process of experiment and research. We began to replace explicit teaching by finding out. . . . We set them to find out things for the service of science, the service of literature, modern languages, music.

"This began to change the whole organization of the school, its aims and methods. . . . The

boys who do not fit into this or that particular work must have some other particular work found for them. You began to design the work of the school for them. . . .

"This actual love of work spreads. . . . Finally, competition dwindles and passes away, so that we have reached what appears to be a change in human nature. . . . I have always held that competition is a secondary interest and creation a primary instinct. Competition dwindles and passes away. Competition is a very feeble incentive to live. It is cheap and easy to arouse the motive, it is a swift motive and on the surface of things ready for you, but it is not even a powerful motive. Half the boys it dispirits and leaves idle and useless.

"Out of all these things I have been telling you, out of all these considerations, evolves the modern school. The modern school is not made by the very simple and easy method of abandoning Greek. Nor is it made by introducing science and engineering. The modern school's business is to impress into the service of man every branch of human knowledge we can get hold of. The modern method in the modern school does not depend on any method of teaching. We hear a great deal about methods of teaching languages, mathematics, science; they are all trivial. The great purpose is to enlist the boys or girls in the service of man today and man tomorrow. . . . What they have to do is to take part in some

great work that must be done for the community; some work that goes on beyond them, some great spacious work.

"Schools must be equipped spaciously, and they must have a spacious staff. We have masters for mathematics, physics, chemistry, mechanics, biology, zoölogy, anthropology, botany, geology, architecture, classics, history, literature, geography, archæology, economics, French, German, Spanish, Italian, Russian, Eastern languages, art, applied art, handicrafts and music."

Essentially the Sanderson ideas may be summarized as follows:

Schools should mirror the world as it is and as we want it to be. They should exist for service and not for dominance. Coöperation should be the spirit of the school, not outworn competition. Education should discover capacities and talents, not suppress them. Science, that is, tested thought, should dominate every department of instruction. Science itself is filled with romance, is creative and "means change, growth, development, discovery, unrest." Instinctively he emphasized craftsmanship—the use of the hands—which is the basis of most of the productive and professional work of the world. But this was no vocational school. He had no interest in vocational teaching, but every subject undertaken at Oundle was used as a tool, an educational instrument. As a Philosopher of Change, he did not regard Oundle as a permanent model, only as a

stepping-stone to higher and better things. Others were to note its failures or successes as far as these went and to learn from them to do finer things.

VIII

SALVAGING THE YOUNG AND THE OLD

EDUCATION being what it is and has been for centuries, a kind of fumbling toward some dimly seen ideal of usefulness for the individual and for the race, has been so far an inescapable part of the evolution of the mind from the unconscious into a conscious direction of purposes. But in this rapidly changing world, perhaps the creative emergence of new standards in education is already adumbrated. We have seen the futility of education for ornament and dominance and have come to understand the need of education for service and coöperation. So many thousands of years of tragic waste of capacity and talent! So many thousands of years of tragic competition between individuals and nations!

Each generation has forced its successors into a prison house of creeds, politics, slogans, shibboleths, so that none of us are free.

Most people do not realize that education goes on all one's life from infancy to old age. Actual school and college life are only incidents in this life-long education.

Unfortunately these plastic years of schooling

are the most important incidents in educational life, for they may make or mar a man.

William James, in "Talks on Psychology and Life's Ideals," says:

"Old fogyism begins at a younger age than we think. I am almost afraid to say so, but I believe that in the majority of human beings it begins at about twenty-five." What he meant by this was that while such a person gains knowledge of details in the course of years in his business or profession, he is prone to be stationary in the larger categories of conception of things and the relations between things. He goes on to say: "There is a sense of infinite potentiality in us all, when young, which makes some of us draw up lists of books we intend to read hereafter, and makes most of us think that we can easily acquaint ourselves with all sorts of things which we are now neglecting by studying them out hereafter in the intervals of leisure of our business lives. Such intentions are hardly ever carried out."

Is it possible that perhaps the old fogies of twenty-five are chiefly those who have gone through school and college without any contact with real life? They have been subject to all sorts of crystallizing influences. They have their knowledge of things from books. Their religious creeds, their political trends, their economic beliefs, their narrow national ideals have been foisted upon them by their parents. Their

canons of taste in literature and art have been poured into them by their teachers. Their habits, customs, ambitions are gathered partly from their families, but chiefly from their classmates. If they have any preferential interests, they are bound at present to be sports. Any other interest must be smothered in such a milieu. On the other hand, the young men who escape these prison bars and shackles have at least a chance to follow their bent, an opportunity to develop their actual capacities, in coping with the hard realities of life. They must test their potentialities by their own efforts and the consequences. Such men are the Lincolns with six months and the Franklins with two years of schooling. They were able to follow their stars untrammeled.

While William James fixed the period of old fogyism for "the majority of human beings" at twenty-five years of age, he did not have that offensive publicity given to poor Dr. Osler who is said to have fixed it at forty. What Dr. Osler precisely said was: "Take the sum of human achievement in action, in science, art, literature—subtract the work of men above forty; and, while we should miss great treasures, even priceless treasures, we would practically be where we are today. . . . The effective, moving, vitalizing work of the world is done between the ages of twenty-five and forty."

Perhaps Emerson fixed the date somewhat nearer the actual facts when he said that any

person at seventy is a liability to his community.

Oliver Wendell Holmes, working industriously hours every day in the Supreme Court, doing "effective, moving, vitalizing work of the world," has even just recently broadcasted an inspiring address on his ninetieth birthday.

While here is a vast difference in the opinions of experts, it may be conceded that James is in a measure right for "the majority of human beings," certainly up to the present time, though through no fault of theirs, the failure so early being due to age-long tradition that education is ended thus early and the lack of an awakening to the idea of an education never finished as long as life lasts. Many pages could be filled with the marvelous lists of achievements long after these dates by minorities of human beings who have done "effective, moving and vitalizing work" in our busy world, lists that are growing longer every day with the increasing understanding that no time of life interferes with the efflorescence of talent, even genius. Splendid capacities, potentialities in nearly every one are suppressed or buried under habits and customs of hard life.

"Shades of the prison-house begin to close
Upon the growing boy."

Buds of talent or genius spring from the subconscious to near the threshold at any age and unless uncovered by accident or design, subside again, and never come to bloom. All through

life, from infancy to old age, interests from time to time appear, more rarely real enthusiasms, that should be seized upon at the time, made the most of, ere

> "Custom lie upon thee with a weight,
> heavy as frost, and deep almost as life."

Otherwise these interests and enthusiasms fade away never to return, and living loses its true value and significance.

Perhaps it may be well to select a few of many instances of good work done by the minorities after forty.

There was Titian, dying of the plague at ninety-nine years of age, who in his ninety-eighth year finished the "Battle of Lepanto" now at Madrid. While not as good as some of his earlier work, it is still a Titian. Tintoretto painted his monumental masterpiece "Paradise," 74 by 30 feet, after he was seventy. Leonardo painted "Mona Lisa" at fifty-four. Frans Hals did some of his best work after eighty. Michael Angelo did "The Last Judgment" in the few years before he was sixty-six and his St. Peter murals between sixty-seven and eighty-nine. Virgil started the "Æneid" at forty; Dante his "Purgatory" at fifty; Milton "Paradise Lost" at fifty; while Goethe began "Faust" at forty-seven and got to the second part at eighty-two. Voltaire was best after seventy-five, dying at eighty-four. Cervantes

began "Don Quixote" at forty-seven and the second half at sixty-eight. "Robinson Crusoe" was written by Defoe at about sixty. Victor Hugo did his best writing between seventy and eighty. Trollope was forty when he first succeeded as a novelist; Hawthorne forty-six; Edith Wharton forty-three; while DuMaurier never wrote a novel till after fifty and DeMorgan after sixty-five. L. Adams Beck, or E. Barrington, (whichever you choose to call her), in her triple or quadruple personality did not begin to write until after sixty, when she had ten years of amazing creative life. This is only a random selection among thousands that could be collected, but they illustrate the fact that age is no bar to new departures and creative inspiration.

Recently Dr. Lillien J. Martin has written two illuminating books on "Salvaging Old Age," (Macmillan, 1930) and "Sweeping the Cobwebs," (Macmillan, 1933), her own age being now eighty-two, in which she recounts her own experiences in refusing to be old, in traveling through the wide world with open eyes, in learning to drive a motor at seventy-six, and in carrying on a clinic for the creative reëducation of the aged who come to her for help and salvage. These books are based on several hundred cases between the ages of sixty and eighty-six, poor people for the most part who would ordinarily go to almshouses or homes for the aged. There was no charge for the services; and for the old still at

work there were evening clinics. She believes the most common type of old age she encountered began to grow old in childhood, conforming to the old fogyism at twenty-five of William James.

This type "learned and became fixed in the ideas of its period and ever afterwards resisted the acceptance of new ideas, so that whether it dates from the time of early Egypt or from the late Victorian era, the result, as far as the ensuing generation is concerned, is the same. Changing times, progressive thinking meet a stubborn wall of resistance in these old. In view of all this, we believe that those who do not wish to grow old must avoid above all, inflexibility of thought especially in dealing with the young."

She goes on to say: "Let the present generation never forget that in the later part of life human beings are most markedly the sum total of their past experiences, and that the variety of their mental and moral motives will be enormous. This very fact will allow the old a differentiation of purpose and expression that will be of the greatest value to society." There have been nations in which old age was cherished and revered for its experience and wisdom, and in ancient days, this was even true of the West which instituted senates, for senate means originally a body of the old and the wise. The word has certainly degenerated like many another venerable and noble word. It suggests a Dr. Martin clinic for

the Senate, or perhaps a psychiatric examination before election to that body. Cicero ("De Senectute") tells of Cato who, in his eighty-fourth year, said: "The Senate does not find all my vigor gone, nor my clients, nor my foreign guests. For I have never given in to that ancient and much-praised proverb:

Old when young
Is old for long.

For myself, I had rather be an old man a somewhat shorter time, than an old man before my time."

Thus the so-called adult education is a prescription for all mankind. Education never should cease while life lasts. The Fountain of Youth sought by the old conquistador is really in one's own self. Life is not static. No one is the same person today that he was yesterday. Any one can turn over a new leaf any day, do something new, take up new interests of which the world is so full, keep a flexibility in the changing flux of things. If one is tired with the routine in this work-a-day world, the best recreation, the best rest, the best tonic to mind and body is to do something new and different. Seek a new interest and this may grow into enthusiasm without which, says Emerson, "no great work was ever accomplished." For most people at any age it is better to do things with the hands than to learn from books. It is also easier, instinctively

more natural. The hands are still the great organs for the development of intelligence, and the field is wide for their use in all the arts, all the crafts, in scientific laboratories, in mechanics. Sports and games have their place and time, but after all, they are for very temporary change and relaxation; they have no enduring interest. The real value of doing things, from the standpoint of health, rest and content, lies in their usefulness or creativeness. The best work will always be useful or creative or even better, both. This makes for flexibility and growth and for lasting youth of mind and body. It is creative reëducation.

All around us lies the unknown, and uncharted seas await our exploration throughout our lives from early childhood to advanced age. Columbus discovered a new world at fifty-six.

So it behooves us to throw off the bonds of inflexibility that tend all too early to hold us to a routine course of life. When we become conscious of these manacles of habit, and understand the nature of the limitations of our freedom, it becomes easier to turn over some new leaf any day, to establish new interests and thus bring to life the potentialities that exist in us all.

"Men Professe, Protest, Engage, Give Great Words, and then Doe just as they have Done before: As if they were Dead Images, and Engines moved onely by the Wheeles of Custome."

IX

SUGGESTION

EVERY newborn child and every growing individual in the world might be considered a little island of intelligence which the waves beat upon and the winds of heaven blow over scattering waterborne and windborne seeds which may flourish or wither according to the nature of the island's soil. But the air and the earth and the waters about us and around us are full of the seeds of suggestion. The whole ecology for each and all of us is a shower of suggestions. They beat upon us everywhere through every avenue of approach to the growing brain, through the eye and the ear and the sense of touch, even moderately through the senses of taste and smell. There are the words and actions of our parents and teachers to make or mar us; the voices and examples of our playmates and schoolmates and of our priests and statesmen and leaders in general. There are things of danger and beauty too that surround us. Everything in our environment carries through our five senses seeds of suggestion. They are implanted in our brains making permanent registrations even though forgotten. They may or may not be recollected or recallable. They make up the bulk of our

subconscious. There is nothing else in the subconscious but these once conscious impressions, except the dynamic trends and tendencies derived from our ancestors, the race that brought us into being. This kaleidoscopic mixture of impressions and concepts in the subconscious may in itself originate seedlings also. These we call auto-suggestions. It is out of this twilight dream-stuff of the mind that the great creations of human thought emerge, philosophy, art, literature, noble deeds, the magic works of the human hand in construction, tools, machinery.

Very few understand the enormous power of suggestion. The doctors use it constantly, often unknowingly, to inspire hope and to cure disease. Suggestion has a surprising force in stimulating the healing power of nature.

Good suggestions are coming to us at all times from parents, teachers, the clergy and good books and good plays. Bad suggestions too are reaching us on all sides from unfortunate associations, bad books and bad plays and movies.

Caveat emptor! Beware of the salesman! Books have been written on the value of suggestion in salesmanship. Windows of shops are dressed to lure through the eyes the unsuspecting passer-by. Suggestive temptations beset one in every street, appeals to that very human desire to possess things, even if they are unnecessary and useless. On the counters of countless shops are similarly displayed innumerable textiles and

gadgets that satisfy no real need except that of the exploiter of the public. The newspapers, magazines, billboards, everywhere spread the same web of temptation to the unwary—blatant and shameless advertising for the eye and by radio to the ear, of cosmetics, clothing, foods, cigarettes, toothpastes and almost "bigger and better elephants." Indeed one of the super-salesmen might easily induce almost any person to buy an elephant. I once knew an unusually intelligent woman who was persuaded by a gifted auctioneer to buy at a sale a second-hand masonic sword! She wept about it when she got home.

It might be well to consider whether a really good thing does not advertise itself, and whether prodigality in advertising may not be often in direct proportion to a lack of virtue or value in the article so prodigiously proclaimed. Perhaps they "protest too much."

In the well-ordered society of the future, there will probably be no window-dressing, no display counters, no spacious advertising, and the thousands of shoppers of their day and age will know what they need when they start out in the morning and go regularly about it to the decent shop that would have the necessary articles for the home, buy them and complete the transaction in as brief a time as possible.

Most of the news of importance to humanity could ordinarily be condensed on a postal card once a week. This would save a great deal of

brain space for the really important things of life, for culture in general, the reading of worthwhile books, the higher occupations of the spirit of man. All the hokum of advertising would thus be done away with, though there might still be developed a type of constructive advertising for the ethical uplift of the human soul.

The real harm of the newspapers lies chiefly in the suggestions created by their exploitation of sensations, crimes, suicides, kidnaping, etc. No sooner are these dreadful tales broadcast by the newspapers than imitations occur here and there all over the areas of their circulation.

But perhaps the worst suggestion havoc of these modern times is in the motion picture which reaches so many millions of our population, especially the children. And suggestion through the eye is much more powerful than through the ear. The most destructive movie in the world seems to be the so-called "American" movie. It would be interesting to investigate the question as to whether it is really an "American" movie, or as to what is its exact origin. At least many Americans who have seen them all over the world, in Europe, in India, in China, have reason to be ashamed of them and to resent the insult to our country in calling them "American."

For four years the Motion Picture Research Council has been investigating the character and effects of the cinemas on our people, especially children. All of the reports are now pub-

lished by Macmillan, and they are a terrible revelation of the kind of education in crime, sex and love that we are giving to the younger generation.

But what might we not do for mankind through the power of suggestion! Through our schools and temples of vision, our theaters and motion pictures, we could reconstruct the mind of man, implant in our youth ideas that would make them great men, thinkers, poets, statesmen, create a new race of heroes in all lines of human endeavor, until by their united strength of ideas and ideals we should finally people the world with gods. We need the faith and enthusiasm to apply this great force in education. It is a new kind of gardening in the budding soul of mankind. We do not know what new and august races might thereby come to people this rather unsatisfactory globe.

X

ACCIDENTAL DISCOVERY OF TALENTS

WITH dormant interests rising like waves from the subconscious these occasionally make contact with something unforeseen in the environment and an emotional illumination results, as a dark cloud passing may suddenly reveal a brilliant moon or star. There is a magic and unexpected light thrown on the world of things, and a new life opens for the fortunate individual to whom this happy accident occurs. Such incandescent contacts of the latent beats of interest in the mind with significant matters outside itself are not uncommon and may happen at almost any period from early youth to middle age and later, and perhaps account for most of the creative work so far accomplished by mankind. For our methods of education tend to smother the creative spirit. The mills of the world, education, manners, customs, tend to turn out human beings molded to the same shape and level of conformity. Any tendency to departure from the average uniformity in study, dress, behavior, mental development, is too apt to be criticized and frowned upon. Individuals must be sacrificed to the laws of the Banderlog.

A very good example of a new birth of the creative spirit is one described by Prof. Osborn in his book on "Creative Education." It is the story of James Terry who had spent most of his life as a man of business. One day while passing a week-end with a friend in the country, he was groping his way down a dark stairway, when suddenly his hand slipped into a recess in the wall, and came in contact with a stone object which excited his interest. He carried it to his friend in the library and asked what it was. He said: "That is a celt." "What is a celt?" "That is a stone ax made by men thousands of years ago." He inquired where it was found and if others might be secured in the same region. Osborn tells how "On the following day he visited the locality, secured other celts and stone implements, and thereupon became infatuated with the subject of American archæology. He abandoned business and devoted the remainder of his life to archæological exploration and collection, thus accumulating the extensive James Terry Collection of the American Museum of Natural History, one of the finest of its kind."

Prof. Osborn tells also of the very similar experience of J. Reid Moir, a merchant of Ipswich, England, who began a distinguished career in prehistoric archæology through the casual handling of a single flint implement, and his self-education begun in 1909 culminated in the year 1926 in "what we must consider one of the out-

standing discoveries of the Twentieth Century, namely: the existence on the earth of intelligent human beings seven hundred thousand to one million years ago."

Professor Osborn thus describes his own experience: "I did not even dream of possessing biological tastes until my senior year in Princeton when a hen's egg and two simple implements were placed before me and I was told, without previous instructions as to the method, to see how much I could see. I had never before had the least interest in the anatomy of an egg and had regarded the outer envelope and the shell as something to be removed at the breakfast table as neatly as possible. Now, however, there opened to me a new wonderland of architecture, of mechanism, of perfect adaptation of means to ends, which completely fascinated me and was the gateway to many years of research into the laws governing the development of the egg, and the formation of the embryo. About a year previous, I had fairly stumbled upon the fascination of geology and palæontology and without any preconceived intellectual or educational purpose, had planned my first geological expedition which, like the egg, proved to be the precursor of these fifty long years of geological and palæontological research."

The autobiographical sketch of Dr. Henry Schliemann in his book "Ilios" is a wonderful story of a stimulating contact with a receptive

imagination at the age of eight years. His father gave him a volume of Universal History that Christmas in which was an engraving of Troy in flames, with its huge walls and the gate from which Æneas escaped carrying Anchises on his back and leading Ascanius by the hand. The picture made a tremendous impression on the boy. He exclaimed: "Father, the author must have seen Troy." "No, that is merely a fanciful picture." The boy said: "If such walls once existed, they could not be entirely destroyed, and they must be buried in the dust of ages." Though his father argued the contrary, the lad remained firm in his opinion, and at last they both agreed that the eight-year-old should one day excavate Troy. And this he did and the large volume "Ilios" tells the story.

But there were many vicissitudes and great labors to intervene between that boyhood dream and its realization. At the age of fourteen, he could no longer go to school and was a grocer's boy for more than five years in the little village of Furstenberg in Mecklenburg. At that time, nineteen years of age, he said he had practically forgotten everything he had learned at school. One day, lifting a heavy cask, he strained his chest, spat blood, and was no longer able to work. He went to Hamburg seeking light work, but lost several positions because of weakness in his chest. In desperation, he took a position as a cabin boy on a sailing vessel which after tacking

for two weeks against heavy winds was wrecked off the island of Texel. After nine hours in a little boat tossed by the fury of the storm, he and all the crew were rescued. He then obtained a small clerkship in Amsterdam, and made himself valuable by his incredible diligence in learning English, French, Russian and several other languages, so that at the age of twenty-four he was sent to represent the firm at St. Petersburg. They dealt chiefly in indigo. He became wealthy enough at the age of forty-eight to retire from business and begin the excavation at Hissarlik, and the whole great story of the discovery of Ancient Troy and his other work for years as an archæologist in Greece is told in his own books.

Prof. Osborn rightly points out the great importance of Museums of Natural History in education, especially in our cities where the dwellers almost wholly lose touch with nature. As Francis Bacon put it, in a museum "you may have in a small compass a model of universal nature." For here we find on view all the animals and plants of land and sea and air, the structures of the earth and geographical details, the story of the races of mankind, and the works and needs of man (also a part of nature) such as textiles and industries, tools and building materials, food supplies and all that has to do with health and hygiene. And here in New York, for example, with some five million natural objects gathered

together "in small compass," the daily visits of hundreds and sometimes thousands of school children give opportunity for those suggestive contacts that must often stimulate these minds to new interests and sometimes at an early age before current educational methods and all-engrossing sports have laid their dead fingers upon their imagination.

Apropos of this, Prof. Osborn says: "I once asked a very small boy in the American Museum what he enjoyed most. He replied in a low sepulchral tone long drawn out 'fossil fishes.' The boy appeared so young that I could hardly believe he really knew his own mind, but upon inquiry of his mother, I found it really true and that at intervals of a fortnight he would beg her to take him to the Museum to see the comparatively rare and uninteresting exhibit of fossil fishes. . . . We recall how the master naturalist, Edward Drinker Cope, as a very small boy was first attracted to the fossil ichthyosaurs, of which he made his own sketches and observations. . . . These were the first steps of his career in palæontology."

Examples of the accidental discovery of special interests in the scientific field at different ages could be multiplied, but these will serve as fair example of this particular type.

In the domain of art, I should like to tell the story briefly of an old friend, Lars G. Sellstedt, who wrote his autobiography in a volume en-

titled "From Forecastle to Academy." As a boy of twelve, with such education as a boy of that age would have in Sweden, he ran away to sea, and for years he was a common seaman in sailing vessels and steamers all over the world among the Seven seas and later on the Great Lakes. He is not explicit in his dates but as near as I can determine from his own story, he was over thirty-five when he observed some of his fellow sailors scratching pictures and designs on whales' teeth and pieces of ivory which they were able to sell from time to time, and he thought he would try his hand at the same primitive art. He succeeded so well that he soon outrivaled the others. He confesses that his art led to his taking up tattooing, in which he became so skillful that it proved to be quite remunerative. With a new illumination and interest in his soul, about the age of forty he abandoned the sea and sought artists, working for them in their studios, turned to water colors and oils and canvas and achieved so much fame that at the age of fifty-six he became an Academician.

During all these years after the change from the milieu of the sea to the new environment of art and general culture, he worked hard to overcome his early limitations in education and by reading and study made of himself a well-rounded citizen of the world, with an engaging personality, and capable of taking his place in any society of educated men and women. He

was a good Shakespeare scholar and well-read in the literature of several languages. He wrote in an excellent English style and made new progress all through his long life, writing very good poetry after eighty and dying after ninety years, continuing to paint fine portraits, landscapes and sea scenes to the very last.

Many examples could readily be cited of painters, sculptors and others whose careers have been determined at some period in their lives by the accidental discovery of latent capacities; but only a few are needed to illustrate the point I have in mind.

In the field of exploration, I should like to speak of Masson of Kentucky, even though the exact inspiring stimulus to his extraordinary career is hidden from us. I suspect a volume of Marco Polo fell into the hands of this Kentucky boy in the early nineteenth century. His name is not to be found in any current books on biography or any encyclopædia, but there is a tiny reference to him in Allibone's "Dictionary of Authors," without date or place of birth or death, just Charles Masson and titles of his books.

"Journeys in Balochistan, Afghanistan, the Panjab and Kalat" in four volumes, Bentley, London 1844. "Legends of the Afghans" (in verse) 1848. Born apparently about 1798 in Kentucky, at twenty years of age, he must have made his way on foot or by horse and river to New York, whence he took sailing ship for Eng-

land. He spent four years in England, France and Russia before he found himself at Tiflis. He was not led simply by the nomad spirit of the tramp or a youth's longing for wandering and adventure. These four years were years of study of languages, drawing, history and archæology in preparation for the realization of his dream. Then for fifteen years he wandered afoot in Mongol or Hindoo costume or in rags, without money, through Balochistan, Afghanistan and the Sind drawing pictures of cities, landscapes, ancient monuments, collecting the thirty thousand old coins now in the East India Museum in London, following the routes of former Arab travelers and of Alexander and Nearchus, collecting data as to political conditions, military forces, revenues, trades, agriculture, horticulture, religion, manners and customs, ethnology, the fauna and flora, minerals and geology, archæology and geography which he gathered together for publication in his books. Perhaps his chief interests might be considered as archæology and numismatics.

He wrote an unusually good English style; some of his papers were published in French, which he spoke and wrote fluently, and was expert in Persian, Hindi and the languages and dialects of the Balochs and Afghans.

Sir Thomas Holditch, in a fascinating book entitled "The Gates of India," devotes two chapters to Charles Masson, the great American ex-

plorer, unknown in America. I wrote a sketch of him in *Scribner's Magazine,* a few years ago, entitled "Masson of Kentucky."

Holditch says in his book that there is a peculiar value in the records of this traveler and that they are as valuable now as they were eighty years ago. "Nothing seems to have come amiss to his inquiring mind. . . . As an explorer in Afghanistan he stands alone. His work has never been equalled."

It was a long way in those days from the crude and rough borders in Kentucky to Afghanistan, and one cannot but wonder what burning fires of the imagination led this mysterious and unknown youth to the magic banks of the Indus and Oxus to achieve there fame and a great name, even though for a time he seems to have been forgotten.

An example of extraordinary illumination in the field of politics is shown in the life of Sun Yat Sen who, at the age of twenty-five, was graduated from the College of Medicine at Hong Kong, and for years was a busy surgeon in private and hospital practice at Macao and Canton. A life of George Washington fell into his hands and transformed him from an active surgeon to an inspired political leader. It is perhaps not such a great step for a medical man with a large mind to compare the diseases and disorders of the human body with those of the body politic. At any rate, from this time on, he was no longer

satisfied with the arduous daily duties of a practitioner of medicine, but conceived the regeneration of a vast empire, the introduction of Western civilization, and the giving of liberty and equal opportunity to four hundred millions of his fellow countrymen. For twenty years he became a wanderer in all parts of the world preaching the need of a peaceful and bloodless rebellion against the Manchu misrule and despotism, and his story is a romance of hairbreadth escapes, imprisonment, conspiracy, intrigues and persecution. But he became the first President of the largest republic in the world.

Spiritual illumination in the field of religion is a well-known phenomenon. While often sudden and unforeseen, it is often preceded by contacts which tend to foster it, what William James called subliminal or subconscious incubation.

This was probably not the case in the life of Gautama Buddha. The traditional story is that Gautama Buddha, son of a princely house, led a life of luxury and self-indulgence until thirty years of age, having been married at nineteen to a beautiful and rich cousin.

In his twenty-ninth year, driving one day with Channa, his charioteer, by his lordly pleasure-grounds, he was struck by the horrible sight of the decomposing body of a man at the wayside. This had a sudden and singular effect upon him, plunging him into a deep contemplation of the futility of a worldly life. He spent the afternoon

in his pleasure-grounds in meditation by the riverside, and after bathing in the river, returned to his palace. Absorbed in thought he paid no attention to the festivities of the evening, retired early and fell into uneasy slumber. At midnight he suddenly roused, his mind made up, and threading his way among the slumbering Nautch dancing girls in the anteroom, he gently opened the door of his wife's apartment and saw her sleeping among the flowers with her hand on the head of their newly born child. After a few moments of irresolution on the threshold, he tore himself away, went to the main door where Channa stood with a saddled horse already ordered shortly before. Then he rode forth into the wilderness under a July moon with Channa, leaving home and wealth, high position, and wife and child for a life thereafter of poverty and pain. This was called "The Great Renunciation." He rode far and then on the bank of a river cut off his hair with his sword, removed his jewels and sent all back with his horse to his old home by the faithful Channa. After that, for six years he led the life of an ascetic, with penance and self-torture in the mountain jungles of Northern India till his fame spread in all the country round "like the sound of a great bell hung under the canopy of heaven." Over twoscore years of preaching and proselytizing made him head of the religion of the myriads of Buddhists over all Asia.

William James, in his "Varieties of Religious Experience," describes a number of instances at different ages of sudden conversion to a permanent religious enthusiasm.

I cannot forbear mentioning one more instance of the accidental discovery of talent which remade a young man, whom I have come to know, in his later years. Herbert E. House has sketched his own life in *The Presbyterian Advance* under the title "When God Cuts the Die." As a small boy with scarcely a bit of education, he took to the waters of the rivers and Great Lakes in the middle west and at the age of twenty-two was making a success as a steamboat engineer. He writes: "I was an engineer at heart and nothing apart from that interest seemed to have made more than a passing impression. But that night at Haverley's Theatre (Chicago) suddenly something within me let go." It was John McCullough in Macbeth and Shakespeare who "gripped and captured him." As he went out of the theatre, he walked the street for hours illumined, saying over and over to himself: "There's something in life that you don't know anything about." The next morning he got a copy of Shakespeare, (for he had never read a line of him before)—"As I read, I was as thrilled as the night before, and there came over me a great longing for something the social contacts of an engine room could never give. . . . Shakespeare wrought the change within me that

developed into a deep hunger for an education." It was a great and difficult step at twenty-two to begin to get the education that led him through primary schools and college and finally to become a successful missionary in China.

This is a good example of the external contact, the seed of a suggestion, that fell at just the right moment into a mind ready to receive and foster it.

XI

SEARCH FOR AND DISCOVERY OF TALENTS

THERE has been of late a movement in educational circles in several countries for the establishment of special schools for gifted children. This is as it should be. Gifted children are, no doubt, those whose talents have come spontaneously to the surface much to the surprise of parents and teachers as well as to the children themselves. These abilities have flowered and become manifest despite the blindness of the elders to such possibilities. But there are countless other children who are also gifted, but whose dormant capacities await some contact with person or thing to bring them to bloom. The time is coming when there will not be this enormous waste of creative ability. It may be many decades yet, but new methods in education are dawning, and some day these latent powers of the human mind and soul will yield to new ideas in education, conservation and consecration. Let us hasten that day. Wonderful work of this kind is already going on in a few schools like the Lincoln, Horace Mann, Dalton, Bronxville Public Schools, Gary, Winnetka, the Laboratory School at Pasadena and perhaps twoscore of

others in this country—as yet, however, an insignificant percentage of the two hundred fifty thousand schools in America. The leaven is there, and in one or two or three generations all the children will be given wings. We hope it will go as fast as this. Evolution is by æons in nature, and our own conscious efforts to direct the human mind have barely grasped in millenniums the ideal of Mencius as pictured in the quotation on the title page of this book.

The Golden Age for all the gifted children, and that means nearly all the children of the world, is approaching. They will certainly be taken care of in due time.

But in the meantime, what about the grown-ups of today and tomorrow and for the next two or three generations who have missed and will miss these rising opportunities, these old fogies at twenty-five, smothered and benumbed by a system of education for "ornament and domination," falling into the grooves of ancestral habit and custom? Is there any hope for them?

The most of my professional life for more than forty years has been spent in what I call creative reëducation out of invalidism. The preceding brief chapters indicate to a certain degree the philosophy of the purpose and method of my work. It has been almost wholly an experience with adults. While naturally my work has been with invalids, I have gained from my studies important data that have their application to every

normal individual as well as to the depressed and unhappy persons who have come to me for help.

One of the rules I have learned from my experience is that the best rest for any one is to do something new and different. It is restful and uplifting in proportion to its interest.

A good many adults, professional men, business men, and others have instinctively found this out for themselves. They find a new lease of life, a rest for the occupational areas of their brains, by doing some new and different thing.

As an example, very well known to me, I might cite the experience of a group of physicians, gathered together these thirty years in an association in New York known as "The Charaka Club," named after Charaka the Hippocrates of India. The members have all been physicians who have spontaneously or instinctively discovered in themselves some recreative activity that has given them rest and reinvigoration from their arduous professional labors. As instances I might mention a few among the members: Weir Mitchell (poet and novelist), Sir William Osler (essayist and littérateur), Arpad Gerster (etcher), Ward Holden (water color artist), Tait McKenzie (sculptor), Walter Mendelson (maker of grandfather clocks), Robert L. Dickinson (artist), Pearce Bailey (writer of short stories), Harvey Cushing (biographer), Joseph Collins (general literature), Smith E. Jelliffe (botanist), B. Sachs (collector of porcelains),

Dr. George Emerson Brewer, (archæologist and anthropologist), and a number of others who have found relaxation and interest in historical studies connected with medicine.

In other walks of life, there have been many who, in a similar way, have conserved their health of body and spirit by multiplying their interests in divers fields such as J. P. Morgan, Sr., (collector of porcelains, books, manuscripts, excavations in Egypt, etc.;) Edmund C. Stedman, broker and poet; and Edward Bruce, business man till forty-eight or so, now a distinguished painter. My friend, Henry Smith Williams, author of one hundred and six books including the "Historian's History of the World," now seventy years of age, took up painting and etching seriously two years ago and has produced some several hundred works of art in that time, all very creditable and some of great merit. He has illustrated many of his own books.

Another very important result in my own work is that not only does "interest come in beats," but that these waves of interest come at all periods of life, let us say from five or younger to ninety or older, and that if these waves from the sea of the subconscious make some contact with significant objects or events in the conscious environment, a new life of absorbing interest and enthusiasm is born. It is rejuvenation.

Naturally, in the young, these beats are more active and more frequent.

I have had hundreds of patients who have been reëducated out of invalidism by seeking and discovering in them latent capacities, which they were never conscious of and which it was often difficult for me to uncover. Of course, any patient must be studied both physically and mentally as an organic whole, for there is no separation of mind and body. Any physical disorders must be remedied. *Mens sana in corpore sano.* Then any cobweb in the brain must be swept away by the psychotherapeutic explication, that is—by the application of common sense to the problems. I call this *constructive* psychological analysis in contradistinction to *destructive* psychoanalysis which has been having a passing vogue now for a score or more years. In constructive psychological analysis, one seeks through the mind of the patient for any trace of old or new capacity, for those sparks of interest that may lead to illumination.

"The world is so full of a number of things
We all of us ought to be happy as kings."

So the mind has to be ransacked for interests in as many fields of activity as possible: the arts, the handicrafts, outdoor sciences, machinery, intellectual pursuits, writing, translating, etc., like Edison patiently trying five hundred solvents before he found two that would dissolve uric acid

speedily, or like Ehrlich who laboriously experimented with six hundred and five promising therapeutic agents before he became famous as the discoverer of 606.

Perhaps a few concrete examples will illustrate the process and the results.

A young woman of thirty-two was sent to me from New England. She came with a trained nurse. She was much undernourished, very anæmic and so depressed that nothing seemed to rouse her from her lethargy. After the usual thorough examination of the physical and mental condition, the physical needs were attended to by the proper blood and tissue-building diet and remedies, and some three months spent, while the physical repairs were going on satisfactorily, in seeking somewhere in her mind something that would be mentally constructive and uplifting. Every possible contact was made with the long catalogue of possible interests, but nothing could be evoked from that inertia and apathy. Finally one day in despair, I said to her: "At any rate I would like to have you masser your nurse every day for the sake of exercise." A spark of interest lit up her eyes, and she said: "I think I will." She did. She grew more interested from day to day. She said she would go to a school of massage. Then she took courses in physical culture and some three years later came to see me, a strong, healthy, robust personality,

full of the joy of life, professor of physical culture in a large girls' college.

Another young woman, a worker in a sweatshop, emaciated, anæmic, threatened with tuberculosis, without means, I was able to send for three months to the occupation cure Hillbourne Club, Katonah, New York, where she immediately began to gain physically. At the end of three months, her anæmia had disappeared and she was over twenty pounds heavier. On the side of mental reconstruction, her contacts with the sixteen or more arts and crafts in the shops there, led to the discovery that she had an unusual talent for hammered brass work. She was engaged to a plumber and as his skill in soldering and so on was helpful in her own new line of work, they established a successful business in brass. She might well write a biographical sketch, entitled "From Sweatshop and Cemetery to Studio."

A woman of sixty, widow with no children, saddened by a rather hopeless outlook on the future, became so excellent a portrait painter that many of her portraits of officials hang in the State House of her native State. She had not drawn or painted before.

A woman of fifty, unmarried, living in a suburban town with her mother and unmarried sister, became depressed, nervous and rundown, in general health. As her physical state improved under proper treatment, a search was made for

some occupation in which she might have an engrossing interest for the rest of her days. She became a successful and even distinguished bookbinder.

One of the most unusual instances was that of a lady of forty-eight, whose daughters had recently married, and she was left more or less alone to follow her ordinary, year-long pursuits of a society woman in New York—afternoon teas, dinner, opera, theater, bridge and so on. She became depressed, sleepless, rundown, and found life mostly dust and ashes. Was there anything that could rescue her from a deepening melancholy? I improved her physical condition. I searched her mind for several months. I found in her a liking, an interest, for form. We discussed for a time the possibility of travel to the Orient and the collection of pottery and porcelains. No doubt the travel and the study of form in this way would have been helpful. But the plan did not seem feasible for various reasons. She could have no technique of the hands after all these years for modeling, so finally I suggested that through some of her artist friends, she might find a potter who worked with a wheel and induce him to take her on as a pupil. This brought an immediate awakening out of her despondency and she found the potter and began a new life. She was made over. Her whole point of view changed. She became a happy enthusiast in her work, rediscovered old forms, glazes,

and colors, Greek, Egyptian, Persian. She became successful as an artist in clay, a distinguished potter, so that her works went into private collections and museums.

Examples of this kind could be multiplied, but these few suffice to illustrate purpose and method, and to establish the fact that creative education is not only for the children in the schools, but should take an important place in adult education as well. The creative spirit exists in almost every one at any age. Discovered and utilized it should make "all of us happy as kings," bring content, prevent many nervous disorders and prolong life.

EVERYCHILD

Out of the peace and sleep of Nowhere
Everychild comes,
Pushed by the Unknowable Will
Into this perplexing world,
Forever changing
With the processing of things in Time.
Not of his own will he comes,
But decreed to be the blithe carrier
Of human dreams and aspirations.
Latent in him lies promise
Of good for his generation,
Of gifts to posterity.

He and his million brothers
Create our country,
Weave the destiny of the nation.
They are our flag.
Shall we neglect this august possession,
This Supreme Property,
Remembering only mines, forests, railways,
Crops, livestock and ships?

What do we do for Everychild?
What should we do for Everychild?

The exact food, the careful shelter,
The fresh air, sunshine and wide spaces
Of sky and meadow

For frolic play and happiness,
Given without stint to the young lambs
And the young colts and the young cattle—
    Let us give Everychild these!

Into his perfected body pour
The wine and ambrosia
Of goodness and truth
And love and wisdom,
To fit him for the new world
That is to be,
For the new brotherhood of man
And the new work among new nations.
    For Everychild
Let bloom the flower of opportunity!

It is not alone war,
That blood stained Devourer,
That ravishes the garden of youth
Of joy and genius and glory;
But the unseen, insidious,
Slow despoilers of every day,
At work in the tenements,
In the mines and factories,
In the foundling hospitals,
Above all among the underfed millions
That we in our complacency
Think safe from danger in the schools.

Everychild looks at us inquiringly
From the streets,
From the many windows,
From orphan and foundling asylums,

From the factories,
From the squalid homes
And from the homeless places.
From the windows of the schools
He looks at us inquiringly
He, the Future of the Race.

He looks at us and through us,
And far away
Into the distant future,
And sometimes in his eyes
There is hope and cheer,
And sometimes suffering and sorrow,
And sometimes reproach,
And sometimes despair.

We had best stop and look at Everychild,
He is not alone for his mother,
Not alone for his father,
But belongs to every one of us;
He is the deepest concern of us all.

What shall be done for Everychild?

F. P. in *The North American Review*,
November, 1922.

EPILOGUE

In that immense unweeting Mind is shown
One far above forethinking; purposive,
Yet superconscious; a clairvoyancy
That knows not what it knows, yet works therewith—
. . . . . .
Emerging with blind gropes from impercipience.

—THOMAS HARDY

IT was a long road from chaos to the complete atom, that tiny solar system—to the complete cell with life and reproductive powers—to the complete organism of myriads of individual cells associated in perfect coöperative adjustment—to consciousness and a directing mind—

The Unknown Teacher led the progress through æons of scale and feather and fur to hands and feet, the understanding forebrain and personality. And this progress has been by a rhythm, a groping in blinding mists up a mountain, now dropping down a valley and now down a gorge, but ever clearly upward toward the mountain top that overlooks the universe. J. A. Toynbee calls this rhythm "challenge and response." In this wavelike advance and recession there has been many a "Decline of the West" as well as of the East and many a "Revolt of the Masses." Despite these drawbacks ever higher

levels have been reached. Surely the slow evolution from the single cell to conscious personality holds a promise of still more wonderful achievement in ages yet to be—emergence from the individual mind to the tribal mind, the racial mind, the planetary mind.

Consciousness and the conscious direction of living are very new in this unfolding, a few hundred thousands among the hundreds of millions of years. The recent mind of man, stumbling like a fledgling, still follows the old trial and error method of its ancestral impercipient guide. Some day it will have wings. W. B. Cannon in his "Wisdom of the Body" describes the marvelous coöperative scheme of the individual cells in maintaining the stability of the body physiologic and depicts the possibilities of some similar coöperation in its analogue the body politic. He does not say so but I imagine he implies that "rugged individualism" in the body physiologic would be exemplified by cancer.

Coöperation must be the slogan of the future, each individual in the social state doing its best for the whole. In the slow evolution of our new mind, the next step is the superman, with all the attributes of the angels, of whom the seers and prophets and poets of the world have dreamed through the ages. The superman will be superb in health of body, gifted with a clear far-seeing creative mind, filled with the sense of "gentleness

and justice," coöperative with a brotherhood of supermen in upbuilding the new city and new state for the commonweal. There will be no longer national boundaries, nor will there be patriotism, that "last refuge of the scoundrel," and there will be no wars. Wars will vanish when only those over fifty years of age will be conscripted to wage them. Those over fifty would of course include all potentates, kings, despots, statesmen, diplomats and manufacturers of munitions. There will be a League of Nations as visioned for several centuries evolving with time into greater perfection and its flag—over every school house and unfurled from every flag staff in the world might well be:

The earth with its moon rushing through space, on an azure background bespangled with stars, trailing rose-tinted clouds of myriad dawns in its swift flight—symbol of the common hope and aspiration of all Mankind.

The brotherhood of man has been the ideal of the East and West for over two thousand years. It was the Eastern seer who said, "We are all brothers between the four seas."

The One bethought Him to make man
  Of many-colored dust,
And mixed the holy spirit in
  In portions right and just;
Each had a part of mind and heart
  From One Himself in trust.

Thus came the brown and yellow men
And black and white and red,
So different in their outer look,
Alike in heart and head,
The selfsame earth before their birth,
The selfsame dust when dead.

But it is only seventy years since slavery is said to have been abolished in the United States. There is semi-slavery or peonage however even now in many types of occupation. Witness the share-croppers of the South, who are said to number nine millions, two thirds of whom are white. We are still far from brotherhood and coöperation in the advance of civilization.

If we forget for the time being the geography of the planet, the babel of tongues, and "narrow national interests," we find large beginnings in many fields of the international or planetary mind. There are vast contributions from all races and countries to the progress of the whole of human society. Science has never had national limits. Medicine, the study of disease and its cure and prevention, has no geographic boundaries. The arts of painting and sculpture are international in their expression of the genius of all peoples. Music is cosmopolitan in its acceptance and creation by countless lands; even the negroes have given the world their "spirituals."

The makers of marvelous textiles, silks, cottons, tapestries, embroideries, rayons, the pot-

ters with their genius for creation from clay, all have sent gifts from every land to all others as offerings to the spirit of mankind. The inventors of tools and machinery and of new modes of communication and travel, telegraph, radio, telephone, motor, airplane, though of divers races, have benefited the whole world. Any good book arising anywhere is translated into a score of other languages and becomes international property. Ideas, imagination, beauty, truth, philosophy are the assets of the wide earth. Even the common potato, tea, coffee, maize, wheat, indeed all the glorious flowers, shrubs, trees, garnered from every land by intrepid explorers of many races, have now an international currency. It is truly a little difficult to find exactly what is national in all these planetary productions—flags are, and uniforms and warships and coin of the realm.

Histories should be rewritten to show the great contributions of each race to the general welfare and culture of man, and comparatively brief space be given to wars and dynasties and the devastators of mankind, like Alexander, Napoleon, Attila and Genghis Khan.

Practically every one who writes on the world's degeneracy, on bad political conditions in democracies, on reforms in manners and morals, on crime and accidents, seems finally to come to the conclusion that the remedies lie in education. So they do. And the education

should begin early. The plastic mind of the child with that "primitive credulity" that leads him, until corrected by time, to believe in Santa Claus and fairies, is the soil for the seeds of all good suggestions.

He can be taught everything that has to do with good health, exercise, regular hours, diet and preventive medicine.

He can be taught good manners, the rights of others, justice, kindness, unselfishness, courage, and a respect for the fine qualities and accomplishments of every race.

He will enjoy using his hands in drawing, working with tools and apparatus, as preparation for some future calling, consistent with the special talent or skill that the expert seeker for creative possibilities is sure to find in him.

He will learn that coöperation with others in his school work is certain to lead to coöperation in the later occupations of his life, for coöperation so manifest in every cell of his own body, may be led to convince him of the need of the same coöperation in the body politic, and that means the progressive social reorganization of the world.