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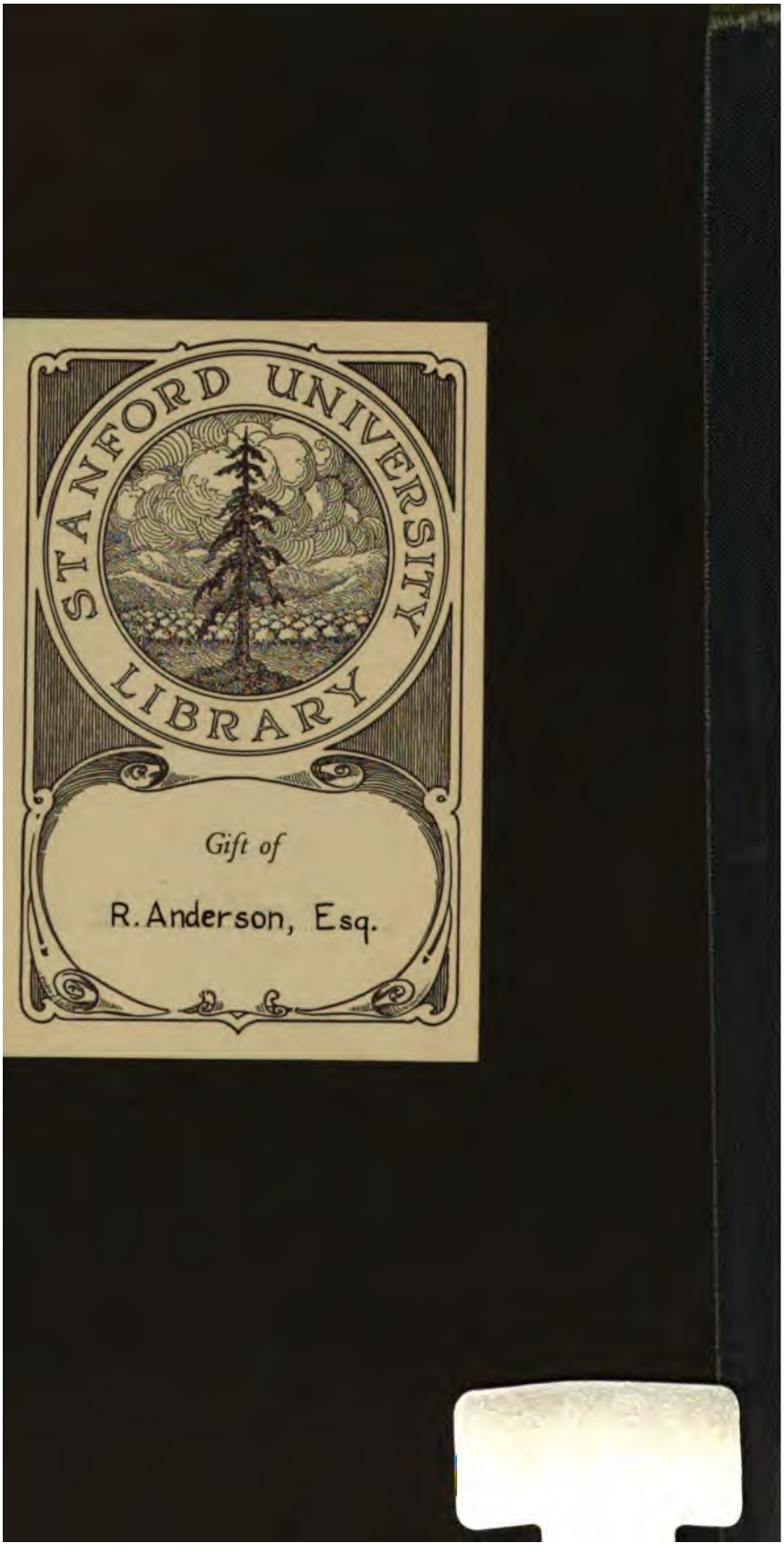
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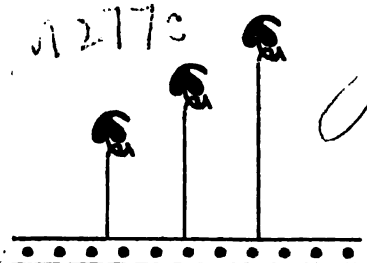

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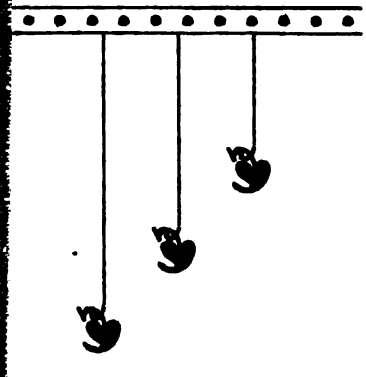

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NATIONAL EDUCATIONAL ASSOCIATION

PROCEEDINGS

OF THE

DEPARTMENT OF SUPERINTENDENCE

AT THE ANNUAL MEETING HELD AT CHATTANOOGA, TENN.,
FEBRUARY 22–24, 1898

PUBLISHED BY THE ASSOCIATION

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1898

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DEPARTMENT OF SUPERINTENDENCE[1]

CHATTANOOGA MEETING

SECRETARY'S MINUTES

FIRST DAY

MORNING SESSION.—TUESDAY, FEBRUARY 22, 1898

The Department of Superintendence was called to order at 10:30 A. M., in the New Auditorium, by the president, N. C. Schaeffer, of Harrisburg, Pa.

Hon. E. Watkins, mayor of Chattanooga, delivered an address of welcome on behalf of the citizens of Chattanooga.

Hon. Price Thomas, state superintendent of public instruction, Nashville, Tenn., extended a welcome on behalf of the state.

Hon. Henry Houck, of Harrisburg, Pa., replied to the words of welcome in the name of the department.

C. J. Baxter, state superintendent, Trenton, N. J., read a paper on "The Township High School," which was discussed by J. Q. Emery, state superintendent, Madison, Wis.; W. W. Stetson, state superintendent, Augusta, Me.; A. K. Whitcomb, city superintendent, Lowell, Mass.; R. K. Buehrle, superintendent of schools, Lancaster, Pa.; W. W. Pendergast, state superintendent of public instruction, Hutchinson, Minn., and John MacDonald, editor *Western School Journal*, Topeka, Kan.

The department then adjourned.

AFTERNOON SESSION

The afternoon was devoted to a conference on the educational problems in the South, conducted by G. G. Bond, superintendent of city schools, Athens, Ga.

The first topic considered was, "What Kind of Normal Training Should the Common-School Teacher Receive?" It was discussed by E. C. Branson, professor of pedagogy, State Normal School, Athens, Ga.; W. N. Sheats, state superintendent, Tallahassee, Fla., and W. F. Slaton, superintendent of city schools, Atlanta, Ga. "A Plan for the Better Supervision of the Common Schools" was the second topic, and was presented by Charles D. McIver, president Normal and Industrial School, Greensboro, N. C., and discussed by Otis Ashmore, Savannah, Ga.; Superintendent Sheats, Tallahassee, Fla.; Captain George Le Roy Brown, University of Tennessee, Knoxville, Tenn.; J. S. Wilson, St. Elmo, Tenn.; Hon. R. J. Guinn, Atlanta, Ga.; Superintendent J. H. Phillips, Birmingham, Ala.; W. B. Thompson, Chattanooga; J. N. Rogers, Sandersville, Ga., and Superintendent Pendergast, of Minnesota. "What the Negro Gets from Common-School Education in the South and What He Gives to It" was the third topic, which was discussed by G. R. Glenn, state superintendent, Atlanta, Ga.

[1] By resolution of the Department of Superintendence at its meeting in Indianapolis, Ind., February 17, 1897, the Secretary was directed to use the following amended spellings in all publications of the department, viz.: Program—(programme); tho—(though); altho—(although); thoro—(thorough); thorofare—(thoroughfare); thru—(through); thruout—(throughout); catalog—(catalogue); prolog—(prologue); decalog—(decalogue); demagog—(demagogue); pedagog—(pedagogue).

The conference of state superintendents on the "Minimum Preparation for Teaching," conducted by Grace Espy Patton, Denver, Colo., met in the Chamber of Commerce. Hon. Price Thomas, of Tennessee, presented a paper on the subject, which was discussed by Hon. O. T. Corson, of Ohio.

EVENING SESSION

President Schaeffer called the meeting to order and appointed the following committees:

COMMITTEE ON RESOLUTIONS

Charles R. Skinner, *Chairman*.
A. G. Lane.
E. W. Mackey.
L. B. Evans.
W. H. Anderson.
J. F. Millspaugh.

COMMITTEE ON NOMINATIONS

G. R. Glenn, *Chairman*.
O. T. Corson.
W. W. Stetson.
E. O. Lyte.
F. Louis Soldan.

The report of the Committee on Elementary Schools, prepared by Dr. John Dewey, Chicago, Ill., was, in his absence, read by Dr. W. N. Hailmann, Washington, D. C. A violin solo was rendered by Professor Joseph Cadek, of Chattanooga. Martin G. Brumbaugh, professor of pedagogy, University of Pennsylvania, Philadelphia, Pa., read a paper on "The Mission of the Elementary School," after which the department adjourned.

SECOND DAY

MORNING SESSION.—WEDNESDAY, FEBRUARY 23, 1898

The department was called to order at 9:30 by President Schaeffer.

Rev. Dr. J. W. Bachman, of Chattanooga, offered prayer.

The subject for this session was, "What can Child-Study Contribute to the Science of Education?" Papers were read by Professor J. P. Gordy, Columbus, O., and Professor R. P. Halleck, Louisville, Ky. The subject was further discussed by Professor Charles O. Hoyt, Ypsilanti, Mich.

BUSINESS SESSION

Professor Ossian H. Lang, New York city, as chairman of the Committee on the Minimum Standard of Professional Requirements of Teachers, asked that the committee be given at least one year more for the completion of its plans and recommendations. On motion, this request was granted by the department.

Dr. Hailmann called up the resolution offered by the Committee on Elementary Education and asked for its adoption by the department. On motion, it was laid on the table, to be considered at the business session of Thursday.

The selection of a place for holding the next meeting of the department was then taken up.

Invitations were received from the following cities: Columbus, O.; Albany, N. Y.; Asheville, N. C.; Detroit, Mich.; Austin, Tex. A vote of preference was then taken, with the following result: Columbus, 75; Detroit, 17; Austin, 12; Albany, 5; Asheville, 3.

The session then adjourned.

AFTERNOON SESSION

The afternoon session was devoted to a conference on "School Hygiene," conducted by Superintendent G. V. Buchanan, Sedalia, Mo. Superintendent Carroll G. Pearse, Omaha, Neb., read a paper prepared by Dr. W. A. Mowry, Hyde Park, Mass., on "Lighting and

Seating of Schoolrooms," after which it was discussed by Superintendent F. Louis Soldan, St. Louis, Mo.; Superintendent J. R. Preston, Water Valley, Miss., and Mr. W. A. Bell, Indianapolis, Ind. On motion, Dr. Soldan's time was extended, and he closed the discussion.

A paper on "Ventilation of Schoolrooms," prepared by Superintendent A. P. Marble, New York city, was read by Hon. H. R. Pattengill, Lansing, Mich. The subject was further discussed by Superintendent S. M. Inglis, Springfield, Ill., and Superintendent J. L. Holloway, Fort Smith, Ark.

Superintendent T. A. Mott, Richmond, Ind., read a paper on "Contagious Diseases." Superintendent B. C. Gregory, Trenton, N. J., continued the discussion.

Superintendent J. H. Snyder, Tiffin, O., was absent, but he sent his paper, which, for want of time, was omitted, but was submitted as a part of the record.

In the conference of state superintendents, Z. X. Snyder, president of the State Normal School, Colorado, read a paper on "Reciprocal Recognition of State and Normal-School Diplomas by Other States." A paper was also read by Superintendent W. B. Powell, District of Columbia, on "Medical Examination of Children in the Public Schools."

EVENING SESSION

Professor A. J. Gantvoort, College of Music, Cincinnati, O., read a paper on "The Influence of Music and Music Study upon Character." President Schaeffer introduced Dr. S. F. Scovel, president of the University of Wooster, O., who discussed the subject briefly.

Mrs. Pratt, of Chattanooga, favored the department with a vocal solo.

Dr. W. T. Harris, commissioner of education, Washington, D. C., then read a paper on "The Value of the Tragic and the Comic in Education."

Superintendent Carroll G. Pearse was allowed to introduce the following motion, which was adopted by the department:

That the president of this department, at this meeting, be authorized to appoint a committee of seven, which shall consider the matter of the classification of receipts and expenditures of state and city school systems, and recommend to the department forms of financial reports suitable for use by all state and city schools; and that the Board of Directors of the National Educational Association be requested to appropriate a sum of money sufficient to pay for the printing of the report of this committee, so that the report may be in the hands of the members of this department at the next meeting.

The department then adjourned.

THIRD DAY

MORNING SESSION.—THURSDAY, FEBRUARY 24, 1898

The department was called to order by President Schaeffer, and Rev. Thomas V. Tobin, rector of Sts. Peter and Paul Church, of Chattanooga, offered prayer.

Principal Richard Waterman, Jr., Chicago, Ill., read a paper on "Vacation Schools." Irwin Shepard, president State Normal School, Winona, Minn., read a paper on "Continuous Sessions of Normal Schools." These papers were discussed by Superintendent A. T. Barrett, of Chattanooga, Tenn.; Superintendent R. K. Buehrle, Lancaster, Pa., and Superintendent D. L. Ellis, Asheville, N. C.

Here Bishop Goodsell, of the Methodist Episcopal church, who was honoring the department with his presence, was introduced by President Schaeffer and briefly discussed the subject under consideration.

BUSINESS SESSION

Superintendent R. K. Buehrle introduced the following resolution, which was adopted;

Resolved, That, in view of the great progress already made in the amendment and simplification of English orthography, as shown by the dropping of the final letter or letters in ax, program, etiquet; of one of the double letters in traveler, worshiping, and woolen; of the *a* in pedagogy and phenogamous; of the *o* in economy, the *u* in honor and labor; and many similar changes and words; a committee be appointed to consider the advisability of certain additional changes to be advocated, looking toward the further and more rapid amendment and simplification of English orthography, said committee to report at the next regular meeting of this department.

A. C. McLaughlin, of the University of Michigan, chairman of the Committee of the American Historical Association and the Study of History in the Secondary Schools, spoke of the nature of the work of his committee and asked the co-operation of the members of the department.

The following resolution on elementary education, referred to in this section, was then called up by the president:

Resolved, That the present president of the Department of Superintendence appoint a committee of four, to be known as the Commiteee on Elementary Education, whose duty it shall be to collect and collate data in accordance with the proposition of Dr. Dewey's report;

That this committee be empowered to complete its organization by the appointment of nine additional members, in accordance with the recommendation of the same report;

And that the officers of the Department of Superintendence are hereby instructed to petition the Board of Directors of the National Educational Association, in behalf of the Department of Superintendence, to appropriate a sum not exceeding $1,000 for the year 1898–99, and a sum not exceeding $1,500 for the year 1899–1900, to be placed at the disposal of the Committee on Elementary Education for the purposes named in Dr. Dewey's report.

Upon motion, action was postponed for one year.

The following Committee on Uniform Reports was named by the president: C. G. Pearse, Omaha, Neb.; W. W. Stetson, Augusta, Me.; D. M. Geeting, Indianapolis, Ind.; John R. Kirk, Jefferson City, Mo.; C. A. Babcock, Oil City, Pa.; E. B. Prettyman, Baltimore, Md.

The Committee on Nominations reported the following names for officers of this department for the ensuing year:

President — E. H. Mark, Louisville, Ky.
First Vice-President — G. H. Conley, Boston, Mass.
Second Vice-President — A. T. Barrett, Chattanooga, Tenn.
Secretary — J. H. Van Sickle, Denver, Colo.

The report of the committee was accepted, and the persons named declared officers for the ensuing year.

AFTERNOON SESSION

The session was devoted to a conference on "Grading and Promoting with Reference to the Individual Needs of Pupils," conducted by Dr. Edward R. Shaw, School of Pedagogy, University of City of New York.

Dr. John T. Prince, agent of the Massachusetts board of education, read a paper on "Some New-England Plans and Conclusions Drawn from a Study of Grading and Promotion." This paper was discussed by Professor W. S. Sutton, School of Pedagogy, University of Texas. A general discussion followed, in which the following took part: Superintendent E. Coleman, Le Mars, Ia.; Dr. W. T. Harris, Washington, D.C.; Superintendent R. K. Buehrle, Lancaster Pa., and Dr. C. C. Rounds, New York city.

Superintendent James H. Van Sickle, Denver, Colo., read a paper on the "Plan of the North-Side Schools of Denver." Superintendent William J. Shearer, Elizabeth, N. J., read a paper on "The Elizabeth Plan." The discussion was opened by Superintendent R. H. Halsey, Binghamton, N. Y., who was followed by Superintendent George Griffith, Utica, N. Y.; Supervisor George Martin, Boston, Mass., and Superintendent J. M. Greenwood, Kansas City, Mo.

EVENING SESSION

The Committee on Resolutions made the following report, which was adopted by the department:

The members of the Department of Superintendence express their grateful appreciation of the efforts of the local committees of Chattanooga, municipal and educational, and of its citizens generally, to provide for our comfort and entertainment, and for their cordial and fraternal greetings.

The profit of this meeting has been enhanced by the privilege of viewing the scenes where conflicts were waged that are memorable in the history of the nation and of the world. Tho memorials of strife and of valor stand upon the fields of Chickamauga, Missionary Ridge, and Lookout Mountain, there has been no bitterness in our hearts as we have discussed measures designed to promote the permanent prosperity and to secure the peace of the republic. Let us hope that education everywhere may teach the sentiments of humanity, and that henceforth all differences between nations may be amicably settled thru the peaceful means of arbitration.

We heartily appreciate the courteous attention and the full reports which the press of Chattanooga has given the proceedings of the department, and accept its intelligent, comprehensive reports as an assurance of the efficacy of the press as an educational factor. May the example of the press of Chattanooga inspire journalism everywhere to give closer attention to educational problems, and to lead in the solutions of questions which concern the development of intelligence and character among the people.

The progress of educational affairs in the South during recent years is a cause for congratulation and encouragement. This progress is evidenced by the larger enrollment, the longer school terms, and the improved equipment of schoolhouses, but more particularly by the greater interest on the part of the people, and the increasing enthusiasm on the part of school officials. We learn with gratification of the improved condition of the negroes, the sympathy between the educators of both white and colored races, and express our confidence in the ultimate moral and intellectual elevation of the negro race by means of proper education.

This department approves of the plan of creating a committee whose duty it is to make or cause to be made a scientific determination of the factors involved in the subjects of seating, lighting, ventilating, and heating of school buildings; and to this end prepare and present to this body, at the meeting in 1899, a preliminary report setting forth the nature of the problems involved and its recommendations for the further prosecution of the inquiry—said committee to consist of nine members, as follows: the United States commissioner of education, two state superintendents of instruction, two presidents of normal schools, two city superintendents, and two other persons.

We commend intelligent child-study, but believe that great caution should be observed in using the child as a subject for psychological experiments, particularly by those not familiar with the essential principles which should be regarded in such investigations.

We recognize the force of utterances made in favor of closer and more intelligent supervision of the instruction given in our schools; the importance of selecting the best supervisors at adequate salaries; of professional training, and the determination to make our schools more useful by making them more attractive, by quickening in them an educational spirit, and by the adoption of proper courses of study and insisting upon the best methods of teaching.

We favor the further consideration and discussion of plans for continuous sessions of normal schools.

We indorse all suitable efforts that may be made to secure uniform qualifications for teachers' licenses for the different grades of school work, to be accepted in any state in the union; and we also favor a permanent tenure of service for worthy teachers who hold such licenses.

The department expresses its obligations to all railroads which have given unusual special rates for this meeting.

The thanks of this body are hereby tendered to the retiring president for his work in the preparation of the program which has been furnished; for the firm, courteous, and dignified manner in which he has presided over our deliberations, and in general for the successful conduct of the meeting now closed.

CHARLES R. SKINNER,
ALBERT G. LANE,
E. W. MACKAY,
L. B. EVANS,
W. H. ANDERSON,
J. F. MILLSPAUGH,
Committee.

Mrs. Watson, of Chattanooga, favored the department with a vocal solo.

The closing address was then delivered by Dr. S. F. Scovel, president of University of Wooster, Wooster, O., on "Realizing the Final Aim of Education."

The retiring president, having expressed his gratitude for the courtesies shown him during the meeting, introduced the president-elect, E. H. Mark, who thanked the members for the honor conferred upon him, and declared the department adjourned.

W. L. STEELE, *Secretary.*

ADDENDA

President Schaeffer reserved the right, before adjourning the department, to name the committees on school hygiene and spelling reform at a later date. The president has appointed these committees as follows:

SPELLING REFORM

Superintendent R. K. Buehrle, Lancaster, Pa. Superintendent T. M. Balliet, Springfield, Mass.
Hon. W. T. Harris, Washington, D. C. Mr. E. O. Vaile, Oak Park, Chicago, Ill.
Dr. C. C. Rounds, New York city.

SCHOOL HYGIENE

Hon. W. T. Harris, Washington, D. C. Superintendent A. P. Marble, New York city.
Hon. Frank A. Hill, Boston, Mass. Dr. E. Oram Lyte, Millersville, Pa.
Hon. John R. Kirk, Jefferson City, Mo. Professor W. E. Watson, Providence, R. I.
Superintendent F. L. Soldan, St. Louis, Mo. Professor W. L. Bryan, Bloomington, Ind.
Professor W. A. Mowry, Hyde Park, Mass.

W. L. STEELE, *Secretary*.

PAPERS AND DISCUSSIONS

THE TOWNSHIP HIGH SCHOOL

BY STATE SUPERINTENDENT C. J. BAXTER, TRENTON, N. J.

Conspicuous and predominant among the educational needs of the United States today is the need for extending our high-school system. A plea for the township high school is, because of existing conditions, a plea for the rural high school. It should be established

I. AS A MEASURE OF JUSTICE TO OUR RURAL POPULATION

Many of our towns, nearly all of our cities, and some of our larger villages already enjoy a very liberal development of this system, and the youth in these centers of population are able to acquire an education that fits them for the ordinary duties of life. The fully equipped high school, in addition to some purely commercial lines of work, gives its students an intelligent appreciation of our literature, a good knowledge of American history; lays a good foundation for both a mathematical and a scientific education; teaches the art and establishes the habit of speaking and writing good English; is prepared to give such instruction in the languages as our colleges require for admission; and, last but not least, it should instill a love of knowledge for its own sake and a purpose to persist in its acquirement; also continue the social development, the character-building, and example in manners and morals that are begun in the

true kindergarten and which are characteristic of it. If equal to these requirements, it furnishes the pupil with the master keys of knowledge, and performs the important function of connecting the grammar school with both the world and our higher institutions of learning. Tho many of the so-called high schools fall below this standard, still our present high-school education is a fairly comprehensive system, whose provisions are liberal, whose results are good, and whose aims are distinctly high and important, because tending to elevate the standard of average intelligence, and to advance our people along the lines of enterprise, culture, and morality.

Up to the present time this valuable provision for larger development has been enjoyed only by those who reside in, or near, our centers of population. The many whose lines are cast outside these centers, on the farms, in the forests, in the mines, and who are connected with various other industrial interests located of necessity where towns and cities are impossible, are denied the privileges and benefits of the system. Our provisions for public education, primarily designed to be of equal benefit to all our youth, are today, because of the development of the high-school feature in the towns, tending to divide our citizens into two distinct classes: first, those for whose training and development a fairly suitable provision has been made; and, second, those whose advantages are confined to the rural school, with its limited curriculum and still more meager equipment. That these two classes will show marked and undesirable contrasts is as certain as that effect follows cause. The urban-bred citizen will be more alert, more progressive, more polished, more resourceful, more capable of discerning or creating opportunities within his environments, or of seeking them beyond, and thus far better fitted to fight the battle of life. The rural-bred citizen will be far less capable of handling new questions or treating complex subjects, less capable of adapting himself to new conditions when forced out of his accustomed sphere, or of making the most of any environment, because natural powers, fully the equal of those of his more favored urban contemporary, have not been so well developed.

Tho our past history affords us shining examples of those who have broken away from conditions most unfavorable, who have risen supreme above every difficulty, and made for themselves a name and fame that are world-wide, this does not disprove the fact that the contrast in culture, enterprise, thrift, and general intelligence between any two communities corresponds with the difference in their educational facilities. Inequality of opportunity does not become a nation which disavows all class distinctions, whose antecedents are democratic, and which professes to be such in principle and practice.

II. EDUCATIONAL EQUALITY IS ESSENTIAL TO PROGRESS AND DOMESTIC HARMONY

Differences such as I have endeavored to portray are too important to be overlooked. They mean the radical division of a free people along the lines of educational and intellectual inequality. This division is not fanciful. It exists today, to an unfortunate and ofttimes embarrassing extent, in every commonwealth of this republic. It shows itself in the adjustment of matters purely local, in the administration of the affairs of the county, the state, and the nation. We see progression on the one hand, and jealousy and obstruction on the other. Elements so diverse in thought, feeling, and motive refuse to harmonize and co-operate, and important public interests are thus sacrificed. Some of this diversity of opinion and purpose is frequently attributed to conflicting personal or sectional interests; but deeper rooted and more potent for right influence, because more closely allied to the higher and nobler self, are the character and the measure of development of the sovereign voter or legislator himself. If these shall come up to the full measure of his responsibilities, he simply seeks to learn wherein lies the greatest and most enduring good to the body politic, and, intent upon securing this, he reaches a right conclusion as to the measures he should support.

Not only in our own, but from all other civilized countries we hear murmurings of discontent, of the need of greater harmony and a closer identity of interest between capital and labor, of a widening breach between the rich and the poor. Educational inequality will tend to increase and intensify this unfortunate antagonism, and the most certain and effective means of counteracting it is to place all communities and classes, in the matter of public education, upon an even footing.

III. A MORE LIBERAL PUBLIC EDUCATION IS IN THE INTEREST OF ECONOMY

In the cities and towns where a more liberal educational policy has long prevailed it is found that the tax rate is lowest. The common council of the capital of my own state recently voted to erect a high-school building at a cost of $150,000. A committee was appointed to visit other cities and towns for the purpose of learning the most modern and desirable plans of construction, and among the things incidentally learned is the fact that an adequate provision for public education is not only in the interest of morality, enterprise, and social advancement, but is also a measure of economy. A higher standard of intelligence tends to a larger average of personal and family possession. This means a greater total aggregate of wealth; and the larger the assessable value of any district or municipality, the lower the tax rate required to secure a

definite sum. Whatever promotes prosperity lessens the demands of charity and the cost of maintaining government. It is far wiser and more humane to give $5 to the cause of education than to pay twice this amount for the support of almshouses, penitentiaries, and courts of justice. The one city of my acquaintance most niggardly in the support of its schools is most heavily burdened with the care of its poor and the control of its criminal element. This is, however, not offered as the supreme motive for an adequate support of a civilizing and elevating force whose highest, most certain, and most enduring rewards are capacity for higher enjoyment, for larger service, for right living, and which are inherent, and neither incidental nor accidental.

We hear much of the claims of poverty upon wealth. Many believe that no one has a moral right to hoard millions within hearing of the cry of distress, of the pleadings of starving children. The broadest, truest, and most effective charity is the humane foresight which so trains the head, the hand, and the heart as to give the masses right views of life, makes them valued and valuable members of our social fabric; which causes them to be self-reliant and self-helpful, and makes them good citizens. This is the right conception of public education, is its high purpose, and is what it should aim to accomplish. This is the debt which wealth owes the commonwealth which gives it protection and which has made its accumulation possible. It is its first and highest obligation, which, if higher motives shall not prevail, it yet should cheerfully meet for its own sake.

IV. BETTER EDUCATIONAL ADVANTAGES ARE REQUIRED TO MAKE OUR RURAL POPULATION MORE CONTENTED AND THEIR ENVIRONMENTS MORE ATTRACTIVE

The products of the soil not only furnish our entire support, but constitute the basis of our national prosperity. Their cultivation, manufacture, and distribution provide employment for more than three-fourths of our population. Foresight, judgment, and personal culture are quite as much in place on the farm as in other pursuits, and intelligent, well-directed labor will always be the most remunerative. Thru the schools and the influence of our teachers, both in and out of school, we should endeavor to correct the popular impression that only the most rudimentary education is required for agricultural pursuits, that learning unfits our youth to engage in them, and that it is quite unnecessary for them to spend much time in school, unless they purpose fitting themselves for one of the so-called learned professions or wish to engage in some employment which they regard as more congenial and genteel. Views thus erroneous are adverse to progress and culture in the rural community, cause its youth to appear at a humiliating disadvantage when

brought into contact with those who are urban-bred, early engender a dislike for country life and a desire to get away from it. Because of this feeling the attendance of many rural schools is greatly diminished, others are attended only by the children of the farmer's tenants, and some are closed; while the school boards of our cities and towns are finding it more and more difficult to provide adequate accommodations.

Our rural interests are so vitally important that it behooves us to furnish educational advantages that will promote their highest development and materially add to the attractions and advantages of rural life. Instruction is needed that will instill a love of nature, introduce more intelligence and culture into the rural home; that will beautify it and its surroundings, and thus bring city and urban life into closer touch.

V. THEY ARE DEMANDED BY THE TIMES

From the close of the great Civil War to the present time our population has nearly doubled, and our great industrial interests have so multiplied and grown in magnitude, have become so diversified and complex, that there is today, not alone a demand for experience and skill, but for intelligent, self-directing labor. This is not peculiar to any single industry, but is a palpable want that is everywhere met, from the carpenter shop to the countinghouse. A contractor recently said: "What a blessing it would be could I find workmen competent to execute the plans placed before them without constant oversight and direction. If supervision is withdrawn, even for a short time, then work wrongly done has to be torn down, and time, labor, and money are lost." A higher order of intelligence is needed on the farm. Farming along the old lines has in many localities ceased to be remunerative. A knowledge of plant life, of the soil and its elements, is essential to the adaptation of means to ends. Tho the school may fail to impart this special line of knowledge, it should at the least develop an intelligence that will make it easily acquired.

These higher demands are not peculiar to our industries, but include the so-called professions as well. Pupils who have acquired but the simplest rudiments of an education are no longer welcome to our leading divinity, medical, law, and dental schools. Many of our state boards of medical and dental examiners decline to examine applicants for license who cannot present a diploma from a college or an accredited high school as evidence of preparation to enter upon the professional course of study required. The same, or an equivalent, demand will ere long be made upon all who seek admission to our normal schools and teachers' training classes.

VI. ESSENTIAL TO A SAFE STANDARD OF CITIZENSHIP

Our so-called elementary or common schools do not prepare the great majority of our youth for the duties of citizenship. Any pupil of aver-

age ability can, under a good school system, easily complete the usual common-school studies by the time he reaches thirteen or fourteen years of age. He is then graduated, not educated, and sent adrift into the world unprepared for its experiences, unfitted for its duties, unfortified against its temptations, and this at the most receptive period of his life—just when best prepared to learn. There is not a teacher of extended experience who has not seen many pupils of this age, who have been given further school advantages, make more substantial progress in a single year than during any previous three years of their school life. Without the secondary or high school, the pupil is deprived of the instruction to which all his past life has led up and prepared him to receive; deprived of the instruction needed to enlarge his mental horizon, that is required to carry his thoughts beyond the environments of home and community to the interests of the state and nation; denied the advantages that would introduce him to a higher manhood, and which would count for so much in his future career as a social and civic factor. Not until this stage of development is reached is the teacher, however skillful, able to lead the pupil to discern and acquire a taste for what is best in literature, permanently to interest him in the affairs of state, and successfully instruct him in the duties of citizenship which it is his birthright ere long to assume. We as educators *cannot*, and no fair-minded citizen *should*, close his eyes to the fact that the education which our elementary schools now provide is not broad enough and strong enough for a sovereign people.

VII. WILL PROMOTE ENTERPRISE AND PUBLIC SECURITY

Go where you will, you will find that the village, town, or city that stands pre-eminent in intelligence holds pre-eminence of rank and is regarded as an example for emulation. You will also find there the greatest business enterprise, the best churches, schools, libraries, and homes, and also the greatest security to person and property. It has been grandly said: "Intelligence is the life of liberty." It is its soul and safeguard. In the intelligence of its people lies the safety of the state. Enlightenment is far more efficacious in promoting the security of a people than military safeguards. Could the large amounts expended by the several states for such safeguards and the maintenance of their expensive accompaniments be diverted to the broadening, strengthening, and upbuilding of their public-school systems, this republic would be without a peer in educational facilities, and within its confines disorder and rumors of disorder would soon be gloomy specters of the past.

Many, with much regret, have noted that, according to our last census, there were in the United States in 1890 6,324,702 persons above ten years of age who could neither read nor write. It is a matter for still

greater regret that we have far more than this number who, in point of intelligence, are hardly one whit the superior of these illiterates, and who have good reason to be far less innocent. Tho they can call words, they either read not at all or read that which is trifling or corrupting. Their thoughts revolve in the same narrow circle, and their feet tread in the same aimless, unaspiring, monotonous round of life. They took the initial steps to an education, but were not long allured in the way. Mainly in this class have the agitators, trouble-mongers, and demagogs found their following and the corrupt politician his purchasable votes. Not comprehending the high privileges conferred, and the great responsibilities entailed, by the elective franchise, it is only charitable to assume that many who thus sell their birthright do not fully realize the seriousness and the enormity of the offense. This is the class of citizens that would be indefinitely multiplied were the advocates of the "three-R" school curriculum able to dominate and direct our educational policy. In this age of enlightenment and progress, it seems almost incredible that any citizen of any state should insist that our public schools should be tied down to imparting the merest rudiments of an education. No state can expect a higher order of fealty and service than it qualifies its citizens to render. The dangers which threaten us originate among the ignorant. Their blind acceptance of the political and industrial heresies so constantly promulgated, and consequent tendency toward socialism and anarchy, can be counteracted and restrained only by the uplifting influence of education. As a nation we are vitally interested in the masses. The children of the plain people constitute the great majority. They will furnish our future voters, legislators, and rulers, and will, just as we shall elect, become either a scourge to threaten and plague us, or a power to dignify and bless.

VIII. ESPECIALLY NEEDED FOR THE IMPROVEMENT OF RURAL SCHOOLS

While it must be admitted that important concessions have been made in many states to the rural population, as regards the levying of school taxes and the apportionment of school funds, it is equally true that the conditions have been such that the rural schools have been operated at a great disadvantage. Tho no material with greater capabilities can be found, such schools have also in the matter of elementary education failed to keep in line with those of our cities and larger towns. The spirit of our institutions and the vital principle of our government demand equality under the law. The indispensable concomitant of equality under the law is equality of opportunity, and this is the central idea of popular education.

Every citizen whose intelligence and manhood serve to dignify the title, while acutely alive to local interests, is at the same time capable of

regarding the matter of public education from a high and unselfish standpoint. Our several states support and control systems of public schools in which over 90 per cent. of our youth receive their only equipment for life. Therefore the state is the true educational unit, and to it must we look for a remedy for existing inequalities. Such remedy is the township high school. It will give the rural schools the supervision they have so long needed. It is their only hope of deliverance from the rut into which they have fallen. Much time and money, and a large measure of the golden opportunities of school days, have been lost to the youth of our rural communities because their schools have been without professional supervision. Such a high school would add to their character and efficiency, because they would be compelled to adapt themselves to its requirements. It would stimulate purpose in their pupils by holding up to them a measure of attainment, and induce them to remain in school that they might graduate at the end of the course. It would be a spur to their ambition by placing before them a goal to reach. With the child the standard of attainment is always the one in sight. Such high schools would relieve our ungraded and some of the so-called graded schools of pupils who have outgrown the opportunities they have to offer.

Every rural school with whose conditions I am familiar has several such pupils. They are so far in advance of the others that separate classification is necessary, and the attention they receive consumes an undue proportion of the teacher's time and energy. Tho the instruction given them is in some cases of doubtful benefit, there is no question as to its detriment to the lower grades. The law very graciously extends to these advanced pupils the privilege of attending school, but fails to provide educational advantages adapted to their needs. It would do better were it to close the doors of our elementary schools against them and welcome them to the township high school, which, together with the kindergarten, is required to round out and complete a public-school system.

IX. WOULD PROVIDE A LARGER RANGE OF SELECTION FOR SERVICE

If mental endowment were confined to fortune's favored few, to those who have at their command educational advantages and all other good things which wealth will procure, then the desirability of a higher standard of popular education would not be so apparent. But the sturdy children of the day-laborer sometimes furnish far better material for development than the offspring of his wealthy neighbor. Not all the children of the poor were ordained to be "hewers of wood and drawers of water." There is no broad-minded democratic teacher who fully realizes his equal measure of obligation to each pupil, and who sincerely desires for each all the good the world has to offer, but has many times

earnestly wished that this or that bright child might have educational advantages beyond its parents' means, and be delivered from its hard and ofttimes debasing environments. How often has he regretted that so much of good seems placed beyond its reach, and thought how much more life could be made to mean to it than is ever likely to become a reality! And not alone, how much of light, and joy, and good, exists in vain so far as such child is concerned, but how much is lost to the community and the state!

The state has need of all the gifts that can be brought into its service, and, thru its failure to develop these gifts, to marshal all its available forces, falls far short of securing the high order and full measure of service that is its privilege.

X. AS A MATTER OF NATIONAL PRIDE

When history and all human experience prove to us that a state or a nation becomes strong, safe, and prosperous in the ratio that it advances in intelligence, it would seem that further reasons for promoting such intelligence need not be adduced. But there are some subjects of abiding interest not easily divorced from sentiment. In the world's onward march we as educators cannot endure to see our country fall behind. Her reputation is so dear to us, and so closely allied to our own, that we cannot avoid anxiety for that which makes or mars it; cannot avoid feeling deeply concerned for the interest with which we are connected, which we profess to serve, and which it is our high prerogative to advance. It would be a reproach to us should the United States fail to keep in line with the most progressive of the nations.

DISCUSSION

J. Q. EMERY, state superintendent of public instruction, Madison, Wis.—In what I have to say on the topic under discussion I keep in mind the intimation of the president of the department, when inviting me to take part, that the experience of Wiscorsin would be the contribution expected from me.

In 1874 the then state superintendent of Wisconsin, in his annual report upon the conditions and needs of the schools in the state, strongly urged the adoption of a system of township high schools, and in his report clearly, forcibly, and eloquently outlined his ideas of what the character of these schools should be. He showed that his purpose in advocating this measure was not to provide a "*few long ladders* by which to climb to the solitary peak whence all the wisdom of the earth is under view, but rather many short and convenient and inexpensive ones by which to climb to the broad and fair and wholesome table-land of secondary culture." He did not urge the schools that he would have established, as *preparatory schools*, in the sense primarily of fitting pupils for higher education, but rather as *supplementary schools*, which should afford facilities for instruction in

the secondary branches better and more systematic than could be obtained in th. schools, which were then largely overcrowded. * * * * * *

Following his recommendations, that were strong, urgent, and enthusiastic, the l lature enacted a law which authorized the formation of high schools by towns, cit. villages, or school districts. They were to be aided in their maintenance by a direct appropriation of $25,000 from the state, giving to each not to exceed one half the amount paid for instruction, and not to exceed, in any case, $500 in any one year. To secure state aid, these schools were to be maintained at least thirteen weeks each year. * *

If any state has made a strong and persistent effort to promote a township system of high schools, that is true of Wisconsin. The leading teachers and educators everywhere were heartily in sympathy with the movement; a system of normal schools had been established, and they, too, were in sympathy with it; and it has received the cordial support of the state department all these years.

The clause in the original law which authorized villages, cities, and districts to organize these high schools was soon discovered to be a feature that could be used to their own great advantage. Very quickly free high schools began to be organized in cities and in village districts, in connection with the graded schools already existing. In many places where graded schools were not sufficiently organized, efforts were made to bring them into conformity with required conditions, that they might also have a high-school department under the state system. These schools continued to increase. Their value as a part of the school work of these places was recognized, and they became very popular.

After some years a state superintendent called the attention of the legislature to the fact that cities and villages had so largely utilized the proffer made by the state for aid in supporting high schools that they had absorbed all the appropriation without being able to receive one-half of the amount paid for instruction, as originally provided, even with the low minimum of $500. He recommended that the state appropriate an additional $25,000, to be used exclusively for the maintenance of high schools in towns where no graded schools existed, thus making a specific and direct appropriation for the encouragement of township high schools. This law was enacted by the legislature, and has ever since been on the statute book. Every state superintendent has urged towns to take advantage of the law. * * * * * * * * * * *

In the course of legislation several features have been added to the original law. Provision has been made that in the regulations for the organization of these schools not less than twenty-five pupils must be found resident of the high-school district organizing the school, who can pass a satisfactory examination in the common-school branches. When the high school is authorized and established, it must be taught by principals who are university, college, or normal-school graduates, or who hold state certificates. A course of study approved by the state superintendent must be administered. Another of these additions in recent years is that, when the second $25,000 appropriated for schools in towns where no graded schools exist is not called for by that class of schools, it is permitted to divide the fund among the high schools of the other class.

These schools have also been placed under the direct supervision of the state superintendent, and, as assistant to the state superintendent, a state inspector of high schools has been provided, who is paid a generous salary, and who spends his time in inspecting the schools, advising the teachers, inspiring the communities with a good sentiment toward high schools, and in enforcing the laws and regulations relative to the qualifications of assistants and principals. The qualifications of each principal and of each assistant must be approved by the state superintendent. * * * * * *

Notwithstanding the purpose of the original law, all the efforts of the leading educators and teachers' associations of the state, of the state department of education, and

the direct aid proffered by the state, the people of Wisconsin have not made the township the unit for organizing *high schools*. They have readily seen the value and acknowledged the worth of high schools, and have established and maintained them liberally; but they have been organized in connection with the district unit rather than the township unit. So they have been organized very largely, almost universally, in connection with our graded-school system. We have three schools in the state that are maintained by towns in which no graded schools exist. No more than four such schools have ever existed at any one time. Different schools of this class have, from time to time, changed their basis of organization from the township to the district unit.

While we must admit that the original and continued effort to establish and maintain township high schools has not resulted as anticipated, and that their advantages, in the indirect way, which were hoped to be produced upon the rural schools, have not been secured, still Wisconsin has developed a free high-school system of which she is proud. * * * * * * * * * * * * * * *

The Wisconsin free high schools, as now organized and administered, are a great power in the state educational system. They furnish the requisite academic preparation for the admission of their graduates to the state university, the state normal schools, and the college. They are the chief reliance for preparing the great body of teachers required in the district schools. Their influence is very great on the work of the lower related grades and on the work in surrounding rural district schools. The high schools receive a very great stimulus from the university, the normal schools, and the college, and in turn furnish incentives that give a great uplift to schools of lower grades. And they are the local secondary schools in which many young people find their only opportunity for supplementing their common-school education.

STATE SUPERINTENDENT W. W. STETSON, Augusta, Me.— Illiteracy is increasing in the older states. One of them has dropped to the fourteenth place, another to the twenty-fourth, and still another to the twenty-sixth. These changes are due to three principal causes: children have not the sterling qualities which make it possible for them to provide means for their own higher education; the expense of a secondary education has largely increased within the last twenty-five years; the local interest in academic education is not as influential as in former days. It is a noticeable fact that primitive and coarse surroundings, which were means of grace to a pioneer people, are sources of poison to poor people in old communities.

These conditions indicate the need of high schools in rural towns. Where maintained, it is noticed they are helpful in producing the following results: They exert a wholesome influence over pupils in the lower grades by stimulating the boys and girls to continue their education in higher institutions of learning. They elevate the standard of the local teaching force, and thus furnish a higher grade of instruction. They breed an intelligent interest in education in the community. They save parents large sums of money by permitting them to educate their children without sending them abroad to attend fitting schools. They bring college boys with their stimulating influence into the homes of the country people. In many instances they become the literary center of the town, and have connected with them libraries and other helpful agencies. The high school should be located in the common-school building which will best serve the largest number of pupils in any town. Funds for its support should be furnished, one-half by the state and one-half by the town. The course of study should include instruction in three sciences, three departments of mathematics, and four years of work in English. In special cases Latin may be substituted for a part of the English and one or more of the divisions in science. The strongest personality and the best teaching force of the school should have charge of the instruction in English.

A. K. WHITCOMB, superintendent of schools, Lowell, Mass.— I am glad to be able

to report that what Horace Mann called "the inalienable right" of every child in the commonwealth to all the education for which God and nature fitted him is secured, so far as a free public high school can do it, for every boy and girl in Massachusetts. By state law, every town, or township as our towns would be called in most states, must maintain a high school or pay the tuition of its children in the school of some other town or city. If the town is so small that compliance with this law would be an unreasonable burden, that is, if its total valuation is less than one half million dollars, the state pays the tuition. Free transportation is also provided in some cases, and the road is thus opened for every child in the state to go straight from his mother's knee to the university, by the way of the free public school. More we could not well do; less we would not.

R. K. BUEHRLE, superintendent of schools, Lancaster, Pa.— I wish to ask whether the conditions described as existing in Massachusetts are not those of urban schools rather than schools in sparsely settled rural districts. We are told that Massachusetts has the longest school term, pays the highest wages to teachers, and offers high-school facilities to all her pupils. Is this not due to the fact that the population of Massachusetts is centered in large cities and thickly settled communities? This is a point to be taken into consideration whenever we make comparison of educational advantages in different states in the union.

W. W. PENDERGAST, superintendent of public instruction, Minnesota.— The rural population of Minnesota is very large and the urban comparatively small, yet all that the gentleman from Massachusetts said about the high-school privileges enjoyed by the pupils of that progressive commonwealth is equally true of the North Star State, where *no* tuition is paid *by* or *for* non-residents.

Every high school, in consideration of the special aid received from the state, holds its doors invitingly open to all scholars under twenty-one who are fitted to enter, no matter in what part of the state they may live.

WHAT KIND OF NORMAL TRAINING DOES THE COMMON-SCHOOL TEACHER OF THE SOUTH NEED?

BY E. C. BRANSON, PROFESSOR OF PEDAGOGY, STATE NORMAL SCHOOL, ATHENS, GA.

1. The common-school teacher of the South does not seem to me to be uniquely conditioned either in his resources or his needs. If his scholarship or pay be poor, this has not been without parallel elsewhere. If he is an apathetic drudge in need of spiritual awakening, this again is a state of things common enough among underschooled and overschooled teachers alike.

To be sure, the common-school teacher has only recently come into existence in the South, but he has been embarrassed by untoward surroundings, yet no more than elsewhere at the start. Whenever he has had ability and character, he has come into public place and power as often and as easily in the South as in the North or West. He wears the badge of inferiority no more in my state than in yours. His measure

of contumely in the South is no more than his Peck in the North. There be Pecks south and Pecks north. Perhaps they might be called Pecksniffs all.

And so it may be that a discussion of the professional needs of the common-school teachers of the South will be of general application. Wherever this is not the case, you will not hesitate to set me right, for I have no wish to be impertinent.

2. In a prefatory way I desire to urge certain conditions precedent to the largest usefulness of our normal schools.

(1) Our normal schools need to be open to students thruout the entire year. Otherwise they do not reach the teachers who are already teaching and who in the South are coming widely to feel a need for help. Organization of the work would require something like progressive twelve-week courses, and four stated registration periods between these during the year. The leisure of the faculties for professional search and research would be infringed upon, but doubtless each of us would discover compensating satisfactions in the new adjustments necessary. I believe the boards of control would split differences with us, in salaries and in courtesies, wisely and generously; but, in any event, I am in favor of a continuous session in our normal schools in order to reach especially the teachers who are already teaching, and who want to spend their vacations doing college work with us. As a rule, these students are the most valuable material we have in our normal schools. We had more than five hundred such students in the Georgia State Normal School last year, where our session runs thruout the summer.

(2) The common-school teacher needs to find the gross total of expenses reduced to a minimum in our normal schools; otherwise they are beyond his reach, for his salary in the South is a bare pin's fee. The cost need not be beyond $8 per month for fees, fare, room, room attendance, light, fuel, and laundrying; so the problem has been solved practically in the State Normal School of Georgia.

(3) The faculties of our normal schools need to be out in the open field, working in the institutes and addressing popular audiences whenever occasions arise and chances permit. That is, there is need of missionary work, normal-school extension work, correspondence courses — anything, everything, that will widen and strengthen the influence of our normal schools. Normal-school faculties, like all other college faculties, stand in danger of insularity. It may mean a ripening of scholarship, but it also means a weakening of social and professional power. Besides, there is urgent need in the South of David Page's spirit of propagandism. We have our Horace Mann in Georgia, but we stand in need of David Pages.

(4) I enter upon the next item with pain and hesitancy, but I am

bound to say that I believe the officers and instructors in a normal school ought to be completely committed in conviction and in conscience to the normal-school idea. It is not always the case. Indeed, it is frequently not the case, and I have observed that it vitally affects the usefulness of the school. The most spirited contentions I have ever had in favor of the utilities of professional teacher training have been with teachers and presidents in normal-school faculties. Just as Luther found skepticism rife in the Holy City, so I have found professional unbelief in the high courts of normal-schooldom, prudently silent or cautiously avowed, as the temper of the individual varies. I have sometimes felt that a thoroly honest man, skeptical of the utilities of professional teacher training, would not undertake to direct the policies of a normal school or draw upon its revenues; but I may be wrong, of course.

3. And now I come to consider the concerns of efficient normal training, having in mind, of necessity, the needs of the common-school teachers of the South, with whom I have been, in some way, in contact all my life.

(1) In the first place, there is general need of open announcement that the normal school exists to prepare the fit, and, as far as may be possible or proper for it, to eliminate the unfit applicant for the teacher's place. As a rule, the men who have most influenced the development of normal schools were not bred in such schools.

That the teacher can be made out of any kind of material is a clear fallacy to which normal schools stand committed apparently, and, for the most part, really. Much of the opposition to normal schools in the South, in intelligent quarters, is provoked by this attitude on our part. Would it not be better to say frankly that the teacher can be made out of only fit material; that native fitness for teaching is indicated by such qualities as insight, sympathy, sense, conscience, and courage; that, without these, no amount of culture will avail; and that the function of the normal school is merely to reinforce native teaching endowment with the accumulated wisdom of the race, and so to add to the gifts of each the gains of all in the world of education?

(2) Briefly and roundly, then, a proper teacher-culture endeavors to enrich and develop native teaching aptitudes with academic scholarship, with a knowledge of pedagogy, psychology, and methods, to the end that the teacher may be stimulated to go on to outfit himself still further in virile and thoughtful ways of his own in his own schoolrooms. These six essentials of teacher-culture—native aptitudes, academic scholarship, pedagogy, psychology, methods, and thoughtful experience—are all to be duly valued and set in harmonious adjustment.

No one of these can safely be ignored. No one of them can safely be exaggerated or discredited unduly in our schemes of normal training.

Fundamental divergences begin when we overvalue any one or any combination of them, short of them all. Thus, the Philistine insists that endowments of birth are all-sufficient. The man of university breeding commonly contends that scholarship and common sense are all that is necessary. One eminent normal-school authority discredits methods and practice teaching, and relies upon culture, philosophy, and individuality. The commonest and most lamentable thing is the normal school in which scholarship is at a minimum and the tricks and quirks of mere method are at a premium.

(3) The student that enters a normal school needs at once to have a bird's-eye view of the essentials of teacher-culture, to be set safely upon their mastery and brought to realize that it means a lifetime of tuition, and of self-tuition mainly. There is immediate and immense uplift and enlargement for a teacher in getting a schematic view of his life work. If he be set going properly, in a normal school or out of it, and can keep himself under way vigorously, then his own room and schoolroom may become the best normal school for him. Unfortunately it is common for the drudgery of a teacher's daily work to arrest rather than promote his development in most of these fundamental particulars. This is nearly always the case, unless he have what Wordsworth called the vital soul. And so we find men and women in our normal-school faculties who have ceased to have, or never had, an inspiring largeness of view and a sturdy quick-step upward. Whatever else the common-school teacher of the South needs, he needs first and most of all a broader horizon and a certain precious hunger of soul to know something more than he knows, to do something better than he does, and to become something better than he is. He needs uplift and uplook, and up-reach. If he gets these in our normal schools, he must come into the presence of instructors who in possessions and powers, personality and presence, are tonic and quickening influences; who are centers of light and leading— men and women like the teacher George William Curtis celebrates in *Prue and I*, "who was like a well of deep, pure water, into which we looked one day and saw the stars."

(4) The normal student has a right to expect tuition under instructors of large and liberal preparation, who have run the gamut of school experiences, his own among them, and who are on a footing with him, but are a head taller. Still we find in our normal-school faculties raw, young graduates, capital scholars sometimes, and sometimes capital pedagogs—in the continental sense of the term—but teachers without practical experience in teaching. Sometimes they are very strong and useful teachers; but I dare say they would have been much more useful and strong if they had served a reasonable apprenticeship in the ranks beforehand. Still oftener, and still more sadly, we find other instructors

there who are unaware of the significance of a vast professional literature, or are skeptical of its value.

(5) Again, the common-school teacher down South needs to know more. He needs lamentably a larger scholarship. Our normal-school curricula need extension and enrichment, and need these sadly. Normal schools have upheld low ideals of scholarship, somehow and strangely. The scholarship of normal graduates rarely ever challenges the respect of the universities. The scholarship of normal-school faculties similarly falls under suspicion.

The graduate of the normal school needs to know, not less, but more than the college graduate; to know it more thoroly, and certainly to know it very differently. Our standards of entrance scholarship are low, and of necessity, as it has seemed. We shall probably have to do a great deal of elementary academic work for many years yet. The standards of admission can be raised, slowly it may be. What we can do more easily and more promptly is to enrich and extend our courses. The full honors of the school can be deferred in time and exalted in value. I believe I have been in contact recently with at least two hundred teachers who would return to us during their vacations year after year for ten years in order to win the full diploma of the school. The lesser awards of the school could remain in force and their value be gradually increased. These lesser rewards referred to are licenses to teach, of various grades, good anywhere in the state.

This extension and enrichment of our normal-school courses would immensely magnify and dignify the ideals of teacher-culture along with the whole idea of education, both in the minds of our teachers and of the general public. It would be daring to deny that there is need of both these results.

(6) I stand on ground much less certain when I contend that our common-school teachers need to study methods liberally in our normal-school courses. There is an aspect of this subject that doubtless raises goose-flesh along the spines of us all. But the worth of a teacher is ultimately determined by what he is, what he does, and how he does it. He is immediately and constantly teased by the puzzles of what to do and how to do it. I have been laid under compulsion in this matter by the anxiety of my students, and so have many sins to confess and to regret. Our normal-school courses need to satisfy, as wisely as may be, what the students feel to be an immediate and urgent necessity. There are certainly very grave dangers to be avoided. The student must not be strait-jacketed. He must not be allowed to drop into the imbecility of mere imitation. Individuality must have the full limits of rational freedom. Thoughtfulness must be challenged at every step of the way. He must be compelled to hunt down the explanations of successful teaching and

the causes of failure. His mind must be kept busy noting the purposes in the teaching, the principles of teaching at play in it or the lack of them, the orderliness of the details or the lack of it, and the subjective results of it all upon the pupils taught. If the student's work in methods can be safely based upon observation, reflection, and expression, then, perchance, we may avoid turning out "the trained teacher, who is no more a normal teacher than a trained dog is a normal dog," as has been said. I agree that satisfactory work in methods in our normal schools is a very, very difficult problem. I have been brought to realize this keenly, and have asked, Who is sufficient for these things?

The student needs a chance to observe model teaching in the model school. The head of the model school needs to have a rational and liberal educational creed, needs to be broadly and acutely a woman of philosophic sight and insight, needs to have swept the field of educational ideals and endeavors, needs to know what the great world is doing in its schoolrooms today, needs to be a woman of unconscious skill, and to have the ineffable graces of the real teacher. What she needs to know and to be takes one's breath away; but every other instructor in the school needs to be all this no less than the model school-teacher. I have not observed that it is deemed necessary for the ordinary college professor to be a master of class methods; but it is overweeningly necessary that the normal-school instructor be a real teacher, whose recitations constantly exhibit sound principles of teaching, and are objective studies for the student in safe methods.

Formal pronouncements upon methods need to be made up by a man who has restepped the march of developing educational ideals and methods; who knows what is ideally desirable, and what is actually possible for his students in their schoolroom experiences; who is a sound pedagog and a teacher of practical skill; who knows what has been done in the schoolrooms of the past, and what is going on in the best schools of today; who lays stress upon the purposes and principles of method, and arouses intense activity of thought in his treatment of this subject. These sound like extravagant conditions, it may be, yet they must be approximately satisfied, or every once in awhile we shall have our students pitching their tents in the graveyard of dead methods.

Observation and reflection in the methods course need to be followed by expression of professional gains in practice teaching, wisely planned and conditioned. Here again is a problem of great perplexity. So difficult is it that it is easily a failure or worse. I may say frankly that it satisfies me as little in our own school as it does in most of the normal schools in which it has been my fortune to study it. But the possible values of it seem to me to be beyond all question. It forces students into pedagogic attitudes. It arouses intense activity of mind. It brings

a student into practical consideration of the purposes, principles, and details of good teaching. It evidences to him the necessity of carefully planning his lessons. It discloses to him his weaknesses, his poverty of resources, and his need of knowledge, much beyond what is ordinarily thought to be necessary for the teacher in elementary work. But the surroundings easily induce paralyzing self-consciousness, exaggerate the mechanics of mere method, and depreciate the transcendent values of personality in teaching. The fact that real teaching at the last defies analysis and communication is apt to be overlooked. Real teaching, like good manners, is a thing that can be learned, but cannot be taught in its very finest sense.

(7) And, finally, our teachers need to be started in our normal schools into a sound educational philosophy, and to come to love this side of their work with steady cumulative fervor, as their hands are more and more dyed in the details of practical teaching, and their hearts are more and more mellowed by the companionships of youth and the widening relationships of life. We have come much nearer relating the philosophy of thought to the problems of instruction than we have come to relating the philosophy of ethics to the problems of discipline and control. What we have done with ethics in our normal schools is either nothing at all, or is a thing altogether in the air that touches the earth at no point whatsoever. Our schemes of discipline are yet to be brought to the bar of philosophy. This subject seems to me to be overwhelmingly important, and yet we have done relatively little toward its solution.

What kind of normal training, then, do the common-school teachers of the South need? In a word, they need a kind of training that can be had only in the presence of men and women whose lives are both concentrated and consecrated, as Froebel's was—

> "Who grew not alone in knowledge and in power,
> But day by day and hour by hour
> In reverence and in charity."

BETTER SUPERVISION OF THE PUBLIC SCHOOLS IN THE SOUTH

BY CHARLES D. McIVER, PRESIDENT OF THE STATE NORMAL AND INDUSTRIAL COLLEGE, GREENSBORO, N. C.

The census of 1890 showed the following percentages of urban population as compared with the total population;

For the United States,	29.20
North Atlantic states,	51.81
North Central states,	25.91
Western states,	29.99
South Atlantic states,	16.03
South Central states,	10.45

The urban population in the entire South is less than 13 per cent.; the urban population in Mississippi is less than 3 per cent.; in North Carolina less than 4 per cent.; in Arkansas less than 5 per cent. In other words, two-thirds of the people in the United States live in the country, or in villages and towns too small to be considered as cities. Less than half the people in the northern section of the country is found in cities, while in the South the rural is more than six-sevenths of the entire population, counting, as the census report does, no community a city whose population does not number 8,000.

Even including all towns of 1,000 inhabitants in the urban population, it is estimated that in such states as North Carolina, Mississippi, and Arkansas about nine-tenths of the entire population live in the country.

Considering these conditions, the supervision and improvement of the country public schools is a question of supreme importance.

Practically all public schools in our large towns and cities are under some kind of intelligent supervision. It is equally true that intelligent, effective supervision of the public schools in the country is very rare.

That this is true is not chiefly the fault of the supervisor. In the discussion of this problem he should be protected from assault by some such sign as the one used in the "big meeting," which read: "Don't shoot the organist. He is playing the best he can."

Let us look for a moment at the conditions by which the average supervisor of public schools in the country is handicapped.

To begin with, the average county supervisor in the South receives only about $500 or $600 a year, and in many cases, if not all, he must pay his traveling expenses out of that salary.

The difference in density of population between the northern and southern sections would render a system of supervision which is fairly satisfactory in the former totally inadequate for the latter. The number of inhabitants to the square mile in the South Atlantic states in 1890 was 32.98; in the South Central states, 18.94; while in the North Atlantic states the number was 107.37. In Massachusetts the number was 278.48, while in North Carolina, Georgia, and Tennessee the number was, respectively, 33.30, 31.15, 42.34.

Even in 1840, when the general public-school movement began to take shape, the South Atlantic states had for each square mile only 14.69

inhabitants; the North Atlantic states, 41.72. At that time Massachusetts had 91.75 and North Carolina 15.51 inhabitants. Even if there had been no civil war, and even if the wealth of the two sections had been approximately the same, the work of every part of the public-school system in the South would have been more difficult than the corresponding work in the North, on account of the great difference in density of population. Add to this the difficulty of eradicating a large percentage of illiteracy among its white population, supplemented by the burden of a whole race of illiterates. The difficulties arising from poverty and sparseness of population are intensified by the necessity for maintaining two systems of schools, one for each race.

There is another difficulty in the way of developing a public-school system among us, which in some degree has been, at one time or another, a hindrance to public education everywhere. I refer to the idea that public education is a charity, and that a public schoolhouse is nothing more nor less than a literary poorhouse. Up to thirty years ago the best-educated men in many of the best sections of the South regarded, and sometimes called, the public-school fund the "poor fund," and the free schools were regarded as places where benevolent-minded people saw fit to care for the indigent. This idea remained longer with the South than it did with the North, or with those sections settled by emigrants from the North and South. However, the idea of charity in connection with public education has not entirely disappeared in any part of the country. In many sections outside of the South there is a system of free text-books to the children of the "indigent poor." So long, of course, as the idea of charity is connected with public education, two baneful results are inevitable: first, a failure to realize that the public schools ought to be as good for the supposed beneficiaries as the supposed benefactors would want them to be for their own children; second, the pride of many self-respecting parents would prevent them from sending their children to pauper schools.

If it has been a difficult matter to secure effective supervision in the rural districts north, how much more difficult has been the struggle of the state superintendents and the county superintendents and the other educational leaders in the South, where most of the difficulties encountered in the North are supplemented by poverty, sparse population, the double school system, race prejudice, and kindred hindrances!

I have not drawn this rather dark and somewhat desperate picture of our peculiar difficulties to make a complaining comparison, nor is there intentionally in anything I have said either envy, jealousy, censure, or apology. I have simply stated the hard conditions under which we labor, and I desire to go on record as having faith in our ability to meet the

obligations resting upon us, provided we will act sensibly and honestly with determination and patience.

I have no elaborate plan of supervision to propose. What we need is something to supervise, as well as a supervisor. The average length of the school term in the South is only about one hundred days, and any proposed plan of supervision for a southern state which does not include the idea of educational leadership among the citizens in his community on the part of the supervisor must eventually prove a failure. Certainly, if the teachers in the city schools, where comparatively good salaries are paid, need to have their work constantly inspected and criticised by a superintendent, and need his stimulating example and direction in regard to right principles of education and better methods of teaching, no sane person would claim that there is not tenfold more need for this constant supervision in the rural districts; but it is impossible, as I see the conditions, for us to have that kind of supervision in the present generation. What we need most in every country community of the South is at least occasional contact with a teacher who, in addition to his professional skill, enabling him to rank easily among the first men of his profession in the public or private schools of his community, is an educational leader, a citizen of influence, a man of some power among men of all classes.

It is preposterous to suppose that such a man can be secured for $600 a year. Many county superintendents could do good work if they could devote their entire time to their work. But in only twelve states of the thirty-eight having county superintendents is this opportunity given to the superintendents.

Outside of the larger towns and cities, a large part of the educational supervision, including examination and licensing of teachers, is done by people who do not even belong to the teaching profession. Indeed the average county superintendent cannot depend upon his salary for support. If he is a man above average ability either in the teaching profession or another profession, he will receive the smaller part of his income from his supervising work; therefore this work, which ought to command the highest order of ability, must necessarily be considered by the supervisor of secondary importance to his main occupation. Any system which does not propose to keep the supervisor engaged in public educational work of some kind for all of his time will certainly fall short of our necessities. What we need in every county is an educational evangelist who, in addition to his power to train teachers and inspect their work, has especially the power to arouse people and cause them to cease trifling with the great question of education. He should be able to present in a popular way the truth that teaching children is the most delicate and important work undertaken by the state or the individual, and, just beside

that truth, he ought to be able to show, as he can from labor reports, that there is no kind of work calling for skilled laborers in wood, iron, stone, or other raw material for which the public is not willing to pay from two to three times as much as its pays for the teaching of its children.

There is not so much need among us for a new system of supervision as there is for more skill and power in the execution of the systems we have. In the South effective supervision demands a county supervisor who can build up the school system, instruct, license, and inspire teachers, and arouse all classes of citizens to see their duty and their opportunity.

If such a supervisor cannot be secured for each county with our limited means, let two or more counties be united into a larger district. I should even prefer one effective, strong worker for ten counties to ten or more feeble supervisors for the same territory. For ten times nothing is nothing, but one-tenth of one is something.

DISCUSSION

OTIS ASHMORE, superintendent of schools, Savannah, Ga.—While the supervision of the common schools theoretically and primarily deals with the direction of the school work proper, it involves practically two other vital questions, which lie at the foundation of all successful school work, namely, the financial support of the schools, and the selection and training of teachers.

Theoretically and economically the school supervisor should not concern himself greatly about the financial maintenance of the schools. A wise and liberal legislation, supported by an intelligent and progressive public, should look to this. But legislation is not always wise or liberal, and the public is too often ignorant and unprogressive; hence it is necessary for the school supervisor to arouse public interest in education and direct the proper legislation for the support of the schools. This implies a rare combination of tact, energy, and wise statesmanship, together with a broad and practical professional education.

One of the most immediate needs in educational progress in the South is better schoolhouses. The majority of our country-school buildings are a disgrace to this age, and the supervisor should arouse and direct a better public sentiment for their improvement.

Before much material improvement can be made in the common schools, better teachers must be provided; for, after all, the real vital forces of a school must emanate from the teacher. But this most desirable gain depends very largely upon what the public is willing to pay the teacher, for it is quite evident that the great economic law of supply and demand must operate in matters educational as in matters commercial. Any efficient school supervision must presuppose the successful operation of a public financial policy commensurate with the reasonable educational needs of the community. To the creation and operation of such a policy the supervisor must give his wisest and best thought.

But even under a liberal school administration it is very important that the efficiency

of the teachers be constantly increased. Normal schools are doing great good, and I trust that we may feel more and more their great uplifting influence upon our teachers; but it must be remembered that we have a large class of teachers who could not attend a normal school if they would, and another large class who would not if they could. These must be reached; the former by the *up*lifting hand of the supervisor, and the latter by the *out*lifting hand of the school board. The summer institute is potential for much good, and these meetings should be wisely planned and directed. In these institutes principles and methods should largely predominate, and the garrulous "exspurter," as we call him in Georgia, should give way to a practical educator who knows how to stay down upon the earth, while he induces the teachers both to think and to act.

One of the great forces for improving the teacher is a course of professional reading, wisely directed. Here is a wide and fertile field for the supervisor. A small, central, circulating library of professional books, if used aright, will work great good. Thru a well-directed co-operation and a small annual fee a good library can soon be collected, and the beneficial results will soon be apparent upon both teachers and pupils.

Teachers should be encouraged to attend teachers' associations; for, aside from the new educational thought gathered at these meetings, the contact with fellow-teachers encourages and inspires, and begets an *esprit de corps* that unifies and energizes the entire educational forces of the state.

But the technical and difficult function of school supervision is in directing the internal work of the school, and upon this point my limited time will permit me to speak but very briefly. Right knowing is a necessary prerequisite to right doing, and unless the supervisor knows *what* should be done and *how* it should be done, his work will be a case of the blind leading the blind. Alas, how many, both supervisors and teachers, are already in the ditch! To direct others wisely, we should know how others are directed where success is marked. This involves reading and study, and also occasional visits to the best schools of the country, for practical illustrations are the most convincing. It would be money in the public pocket if every school superintendent in the United States were compelled, at least once a year, to visit at the public expense some of the best school systems of this country; and I would specially include those superintendents and supervisors who already know so much that they cannot learn any more, for we would then have more school life and less educational dry-rot than we have now.

Much of the loose supervision consists in ill-defined plans, both in matter and method, and in a failure on the part of the supervisor to lay clearly before the teachers just what he wishes to be done. This involves a well-digested plan of school operations, a wise course of study carefully adapted to the conditions affecting the educational interests of the community, and frequent visits to see that these plans are faithfully executed. The superior efficiency of a supervisor will reveal itself on the occasions of these visits in the value of the suggestions given to the teacher, and upon the encouragement and help in this manner rendered.

Then, briefly, the best supervision of our common schools must look:

1. To the financial support and the physical equipment of the school.
2. To the improvement of the teaching force.
3. To the direction of the internal work of the school.

These functions require knowledge, skill, and tact, and the far-reaching results upon our national life deserve the sincerest thought and co-operation of our wisest men and women.

CAPTAIN GEORGE LE ROY BROWN, United States army, University of Tennessee Knoxville, Tenn.—I have traveled about a great deal in the rural districts of east Tennessee and other parts of the country, and I desire to speak of a matter that appears to me vitally important and easily rectified without money, and yet is priceless in its results.

As a rule, the country schoolhouse is located on a site that cannot be utilized for anything else. All the surroundings are bleak, bare, and primitive. Why should not the schoolhouse and the school grounds be made beautiful?

The homes are made beautiful for the children by loving mothers, and the school should receive like attention. It might be well to elect lady school supervisors to have charge of this feature of moral education.

I do not think we grown people realize fully the lasting impression made upon young minds by environment. I know that, for myself, I cherish among my happiest memories impressions, pictures upon the mind, made by the environment of childhood.

As this question calls for no money and is of easy practical solution, I feel that it ought to receive careful consideration by educational leaders.

J. S. WILSON, St. Elmo, Tenn.—Our brother has presented a somewhat gloomy picture of county supervison in the South as compared with county supervision in the North, and yet, perhaps, not more gloomy than the facts warrant. I have found some comfort in remembering that a little more than a half century ago, when Horace Mann delivered those educational lectures which aroused the people of Massachusetts to a due sense of their obligations to their children, he often had only about a dozen hearers, but the seed was sown on good ground, and it brought forth a hundred fold.

County supervision in the South owes its existence to the people; to the voter; yes, to the parents; and I am pursuaded that, if those appointed to that high and responsible office will impress the southern people with a due sense of the importance of this office, show them that it is the means of securing good schools, they will respond with that liberality which will place real education in this high position.

We are gradually, tho too slowly, getting away from that old tho barren idea that anyone can teach school. Teachers, like the great apostle of the Gentiles, should magnify their office; for to be a true teacher is to fill the highest office under heaven.

WHAT THE NEGRO GETS FROM THE COMMON-SCHOOL EDUCATION, AND WHAT HE GIVES TO IT

BY HON. G. R. GLENN, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, ATLANTA, GA.

The financial answer to this question is comparatively easy. Since the war the negro has received from the common-school fund of the South about $100,000,000. He has contributed in the way of taxes not exceeding $20,000,000, and, according to some estimates, not over $10,000,000. Unfortunately, the figures in many states of the South are not separately kept. It is absolutely safe to say, however, that the negro has received $5 from the common-school fund in every case where he contributed in taxes $1. In Georgia the entire taxable property of the state for the year 1897 was $412,000,000. The negroes returned of this amount about $15,000,000. The amount of property owned by negroes in Georgia will be found to be considerably larger relatively than the amount which they return in other southern states. In Georgia the

amount of money which the negro pays to the school fund on his taxable returns, together with his poll tax, which in this state goes to the school fund, does not exceed one-tenth of the school funds of the state.

In North Carolina there was raised last year from taxes for schools, by the whites, $402,829; by the negroes, $14,708. In North Carolina the negroes own taxable property amounting to $880,074, which is about one-twenty-ninth of the taxable property of the state.

By any comparative estimate that may be made, from a financial point of view, the negro receives a great deal more from the school fund than he contributes. No people under the shining sun have ever shown such magnanimity in dealing with an inferior race as the southern people have shown to educate and uplift their former slaves. The history of mankind does not furnish anywhere a more notable example of liberal and loyal generosity. In spite of misrepresentation and censure, growing out of misapprehension on the part of the people living away from the South, the southern people have borne, and still patiently bear, with a sublime and matchless heroism, a burden which never was undertaken by any other people under the bending heavens. The desolation and poverty of this entire section at the closing of the war may not inaptly be represented by the picture of want that was left in the wake of Sherman's army from this city to the sea. The torch and the sword did not leave enough, as one has expressed it, "to feed a crow." Mr. Sumner himself described the situation when he said: "The war has left nothing in the South but men and dirt." If there had been left in the South only the Anglo-Saxon race, the solution of the problem would have been less difficult; but the people of the South had not only to face the destitution of their own people, but the absolute helplessness and want of 4,000,000 of people of an alien race. Every bond of sympathy and every appeal of humanity demanded that they should extend a helping hand to these helpless people; while every demand of self-interest and every prejudice of racial inequality demanded that they should leave the colored man severely alone. The southern people were not long in choosing which course they would pursue. They have already undertaken the educational uplift of that race. Unaided by the government that set the negro free, they have opened a schoolhouse to every black child below the Ohio river. Accepting the truth of history, that ignorance has never been anything else but a curse to the people who are ignorant, the southern people have labored patiently and loyally with their black freedmen, until they have reduced the illiteracy of these people, in thirty years, nearly 50 per cent. There is nothing to match it in the history of people or nation.

In the working out of this untried experiment the South itself is learning a great deal that will be of value to the entire nation. Igno-

rance anywhere, in any race, under all conditions, is dangerous. A cubic foot of poisoned air placed anywhere in this large tabernacle will diffuse itself, by nature's law, until it has poisoned every other cubic foot of air in this building. If there be poison anywhere, it is dangerous on this account. When the poison is once out, it cannot be overtaken and confined. The poison of ignorance is not only dangerous; it is also insufferably expensive. We have discovered in the South that a schoolhouse is cheaper than a jail. Sad experience has taught us that it is better, from a financial point of view even, to save every child, white and black, than it is to lose one of them. We are making our common school more and more the nursery of the republic. We have demonstrated to the world that the negro can be made a useful and a valuable citizen. We have shown conclusively that to leave him in ignorance and abandon him is to make him a standing menace to everything that we hold dear in this land. We have shown, further, that the negro is not only teachable, and susceptible of the mental improvement characteristic of any other race, but his kindly, sympathetic, and loyal disposition may make him a most valuable aid in working out the industrial problem of the South. In the providence of God it may turn out to be a fortunate thing, for the negro even, that his lot has been cast with the patient and chivalrous cavalier rather than with the cold and calculating Puritan. At all events, the South is once and forever committed to the policy of extending a kindly and helping hand to the children of the negro race. We shall redeem these children, just as the children of all other peoples have been redeemed from the curse, by the benign and holy influence of a Christian education.

I know it has been said, and frequently of late it has been printed in the papers on the other side of Mason and Dixon's line, that the education of the negro is a failure. One bold writer in a northern review recently stated that one of three things must happen to the negro: he must be exported from the country, reduced to slavery, or put to death. The South will not be a party to any one of these alternatives. It is also charged that crime by the negro race in the South has been more rampant in the last decade than ever before. These critics remind me of an incident that occurred in the lobby of a leading hotel in the city where I live. Two drummers were discussing a man who has a national reputation. One of them said: "Well, you must admit that he is a very smart man. He attracts the people everywhere, because he knows so much." "Yes," said the other drummer, "that's true, but the trouble is he knows so much that isn't so." The trouble with those writers and speakers who solemnly declare that education has not helped the negro is that they know so much that isn't so. Such products of education as Booker Washington, Professor Council, Professor Adkins, Bishops Gaines

and Turner demonstrate beyond cavil that education will do for the negro race what it has done for every other race among the children of men. It may be that crime is on the increase; but I can prove more conclusively that crime is on the increase in New York, in Chicago, and Philadelphia, than any intelligent man can prove that crime is on the increase among the negroes of the southern states. If crime is on the increase anywhere, it is because the right kind of intelligence is not on the increase. Almost without exception the negroes who commit horrible crimes in the South are ignorant, and brutal and vicious because they are ignorant. Intelligent negroes have never been known to commit this class of crime.. The penitentiary records of my state show, furthermore, that nine-tenths of the negro prison population cannot read and write. If statistics teach any lesson at all on this subject, they teach that the negro has received and is now receiving a great deal from education that not only benefits the members of his own race, but makes life and liberty, and the pursuit of happiness, safer for all people of this country. Besides, it is unwise and unfair to compare what the negro has done in thirty years with what the white race has accomplished in four hundred years. It is absolutely safe to say that no race of people under the sun, starting in illiteracy and without property, has ever accomplished more than the negro has accomplished in the way of reducing the illiteracy of his race, and in the accumulation of property, since he has been set free. Unaided by the white race of the South, of course, it would have been impossible for the negro to have accomplished so much. In this connection it ought to be stated, over and over again, that it was little short of a crime on the part of the general government not to have aided the southern people in carrying the enormous burden that the ignorance and helplessness of the newly enfranchised race imposed upon them. Private beneficence on the part of patriotic individuals and denominational associations in the North have established a few schools for the higher education of the negro, and to those who have helped in this way belong unstinted praise. Among the noblest benefactors of this class stand Peabody and Slater, whose generous and patriotic gifts stand out in bold relief. The perpetual income from the princely gifts of these lordly men come like the free, glad waters of a perennial spring to enrich and gladden the waste places of the South. But the Congress of the United States, that set the negro free, has done absolutely nothing in the way of contribution to the common schools of those states that have had to bear the brunt of the hazardous risks which his freedom along with his ignorance imposed. I believe that the Blair bill was one of the most patriotic measures ever offered to Congress, and that its defeat was not only a calamity to the southern people, but a calamity to the nation as well.

But in spite of all the croaking, doubt, and skepticism as to the benefits of education to the negro, those who have studied the question thoughtfully and seriously, on the ground where the experiment is being worked out, have no longer any doubts or any fears as to the results. The intelligent and far-seeing people of this country are beginning to see that the negro can be made a most potential factor in the industrial revolution that is rapidly going on in the South. As Dr. Harris so well and wisely says in one of his reports: "We are rapidly moving now to the age of the machine. One machine, under the control of the intelligent brain of the operator, is accomplishing now that which it took a hundred hands to accomplish a few years ago." The machine is making its way rapidly to the farm, to the forest, to the mine, and to the workshop. Intelligent labor will be the only kind of labor that the world will want in a few years from now. The day of the mere drudge is rapidly passing away. The negro himself is beginning to realize that he must be an intelligent laborer, or he will not be wanted anywhere. The southern people are rapidly coming to see that it is cheaper for them to spend money in making the negro intelligent and useful as a citizen, and capable as a worker in raw material, than it is to allow him to grow up in ignorance, and become vicious by reason of his ignorance, and a costly burden as a criminal. The southern people are realizing, as never before, that it is easier to raise a tax to build a schoolhouse than it is to raise a tax to build a jail and a penitentiary. We have exhaustless raw materials in the South. We need intelligent labor to work up these raw materials into manufactured products that the world wants. Intelligent and skilled labor, applied to this raw material, will make the southern people the richest people on the face of the earth. Hitherto this raw material has been shipped away from the South to have the intelligence of Massachusetts, Rhode Island, Connecticut, and other northern states stamped upon it. We shall use the negro and the intelligence that we have developed in his race to work up this raw material here in the South. We shall rapidly convert water power into electric energy. We shall plant a machine shop and a cotton factory at every railroad station, and in a very few years the northern visitor to our section shall measure his railroad miles by the towering smokestacks that catch the first sunbeams of each new day.

It may turn out, after all, that the negro may prove to be a blessing to the southern people. Naturally the negro is patient, kindly, sympathetic, and loyal. As a laborer he is easily controlled. He never strikes. He needs only the intelligent industrial and moral training which in this day and time must be given to any class of labor to make it trustworthy and profitable. Before the war, as a slave, he made his white master rich. Who knows that he may not again, as an intelligent freeman, make the southern people rich? We would not exchange him for the class of labor

godless, homeless, and countryless, that is dumped into America at Castle Garden. As the negro shall acquire intelligence, as he shall possess a home of his own, along with these he will learn to produce something that the world wants. That is a glad hour in the life of an individual, or in the life of a race, when the consciousness of ability to produce something useful is born. This hour can come to any man or to any race only along the way of mental and moral growth. When this hour shall come to the entire negro race, there will be no longer any race problem in the South. The negro, with his intelligent use of the machine, with the mixing of his brain with the soil of his native clime, will learn to sing a new melody as he toils with skillful hands in field and workshop and mill. This new melody will mingle the sympathetic tones of the old plantation song with the notes of hope which intelligent industry and thrift will bring into his life.

The North has had her day of triumph and prosperity. Thirty years ago, after a fearful fratricidal conflict, the North was declared victorious in the conflict with bayonets. But in the next thirty years, in a more fraternal conflict, the South will win her triumph with cotton spindles. If the negro shall become, thru intelligent training, a potential factor in this generous rivalry for industrial dominion, the North can have no reason to repine, and the South will have no cause for regret.

REPORT OF THE COMMITTEE ON A DETAILED PLAN FOR A REPORT ON ELEMENTARY EDUCATION

BY PROFESSOR JOHN DEWEY, UNIVERSITY OF CHICAGO, CHICAGO, ILL., CHAIRMAN

In his paper of last year, Dr. W. N. Hailmann indicated the point of view which has controlled the discussions and the considerations of your committee in formulating the following report.[1] As that paper puts it, school instruction and administration must grow out of the pupil's experience; must remember that its object and goal are found, not in itself, but in enriching the child's life experience, and furthering his powers of self-expression and achievement; and that this development must be conceived as social — "the sympathetic co-ordination of individual purpose with that of others in common social endeavor, and in active mutual devotion to worthy universal ideals."

This conception of the relation of school work to individual growth has formed the point of departure of the following report. Such an inquiry obviously rules out investigation of general pedagogical principles on their own account, and equally rules out investigation of the details of school instruction and administration, so far as these operate merely to increase knowledge of such subjects or increased facility in the use of certain school arts. It includes consideration of both details and principles, so far as

[1] *Milwaukee Report*, 1897, p. 199.

they have to do with the conduct of the school considered as an intermediary and instrument in the development of the child himself. This limitation, of course, means no depreciation of the value of the former considerations. It merely states the confines, theoretical and practical, within which the work of this particular committee is contained.

The following report deals:

I. With the general spirit and aim of the proposed investigation.

II. With the general character of the methods to be pursued in reaching this aim; and

III. With suggestions regarding the specific methods to be employed. The latter point is again subdivided into recommendations as to method on the practical or administrative side, and suggestions regarding method on its intellectual side.

I. *Spirit and aim.*

Any proposed investigation which requires the expenditure of time and money should grow out of some specific need in the existing situation. If undertaken on merely general principles, it is foredoomed to failure. Moreover, the exact nature of the particular need dealt with determines the peculiar character of the inquiry undertaken. We assume, therefore, that the best introduction to the recommendations which ensue is in the statement of the needs of the present educational situation in this direction.

A word of caution may, however, be in place. It is not for a moment meant to intimate that any conscious knowledge of the conditions and principles to be set forth is possessed, or need be possessed, by the teachers concerned. We wish merely to indicate from a general standpoint some educational changes that are going on, together with their reasons; to suggest that these have a deep-seated cause and significance; and to intimate further that, since the main phases of the problem are common to all who are working in educational interests, the experiences of those who have been most successful cannot fail to be serviceable to others. We aim simply to put the educational changes in their general social perspective.

It would undoubtedly be an exaggeration to say that we are in an educational crisis. But it is within the bounds of sober reason to say that educational materials and methods are undergoing a decided readjustment, and that, along with positive steps in advance, a certain amount of confusion and uncertainty is attendant upon the reconstruction. The change in the educational system is nothing for which educators and teachers are responsible as individuals. It is the reflex of a general social change; it is evidence of the fact that, whenever other social institutions and forces change, the school, as one among many social institutions, must change also. This change, while in part an effect, becomes also in turn a cause. The school does not passively accommodate itself to exigencies forced upon it from without, but has its own social function which requires it to take a position in actively determining the movement of other social forces.

Out of the large number of tendencies which are operative in modifying the conduct of the school, the following may be noted:

1. There has been a tremendous enlargement of the educational equipment, of the resources which are available in the instruction of the young. The last century—yes, almost the last generation — has set free for general use a large number of valuable instruments, formerly only either in the possession of a few, or themselves so crudely developed as not to be educationally available. This increase in equipment is due in the main to two reasons: the growth of science, both as pure and, more especially, as applied to life in inventions and industries; and to the democratic development which has brought within the scope of every individual opportunities in art, practical achievement, and scholarship, previously open only to the few.

What some term the enrichment of the curriculum, and others its congestion, is

simply the reflex of this social development. History, literature, science in the form of nature study, the arts of music, drawing, painting, various forms of manual training, and now, for the upper grades, elementary algebra, geometry, and one or two foreign languages, have been included within the range of elementary education. They are there either as excrescences, as external attachments, or as organic factors which will not only do their own work, but reinforce the value of all the educational factors. According as the relationship takes one or another form, the so called "new" education means either congestion of the pupil, his distraction and over-stimulation, or else the orderly development and enrichment of his life.

2. Hand in hand with this increase in the educational tools available has gone, of course, an increase in the demands made upon the school by society. The growth of democracy has furthered the necessity of training, not only social obedience and conformity in ways of good citizenship, but also of active leaders in social and political lines. Moreover, the revolution in the industrial sphere, consequent upon the introduction of machinery and the facilitation of modes of social intercourse and communication, has created a demand for knowledge of the scientific processes and facts involved in modern manufactures and commerce. It requires sufficient practical acquaintance and sympathy with conditions of work to enable the pupil to assume, upon leaving school, an intelligent attitude toward these forces, which are fast becoming controlling ones in life. This response must be active as well as passive. New inventions follow each other so rapidly that the individual who can only passively conform is sure to be left behind in the industrial readjustments consequent upon changes in machinery, and in methods of doing business. Unless he is to sink down to the level of semi-dependent, unskilled laborers, or else become an object of charity, or even a criminal, he must be trained to such power of using his own intelligence as will enable him to keep his own feet, and help determine his own career.

3. The democratic development, once more, has tended to make the child more and more an end in himself. He is now seen to be a personality, not merely in germ or potentially, but actually. The same social movement, which has transformed slaves and servile laboring classes into persons who are ends in themselves, is affecting also the status and claims of the child. That such a movement is fraught with danger, as well as with responsibilities of higher achievement, there is no need to argue. Unless this tendency is adequately directed, it can mean only still greater disintegration of the family, and the uprearing of youth who are undisciplined, demoralized, and who know no law excepting that of their own whim and momentary interest. But the growth of the psychological sciences has given an added means of insight into child nature, so that along with the new demand there has come the power of meeting it. Upon the school, however, along with the family, falls the fundamental responsibility for the adjustment of problem and response. Here, or nowhere, must the adjustment be made. The whole matter of the relationship of school methods and materials to the positive development and direction of child life is ripe for consideration.

These various phases of social growth have imposed upon the school new duties which, partly by instinct and partly by purpose, it is attempting to meet. It is endeavoring to see to it that the society which is in process of forming shall be met by an individual prepared to take his place actively, as well as passively, within it. To secure this end, it must use all the instruments put at its disposal, and use them in such a coherent and definite fashion that they shall be really serviceable — neither mere fads, nor mere extraneous devices for arousing and stimulating interest in the older and more routine studies, but intrinsic tools in the development of the whole child nature.

Various communities have felt the demand with varying degrees of force, and, owing to local and variable elements, have met it with varying degrees of success. Some time

or other, however, the demand is sure to become universal. It will have to be met in both country and city, in both manufacturing and agricultural districts, and in slums as well as in the sections more favored with wealth and culture.

Here we have the particular problem set for any work of investigation to be done along these lines. It is to gather up the results which mark the higher points of achievement in this direction; and to organize these in such a way that they will be put at the disposal of other teachers, thus illuminating the work of all and economizing their time and effort by showing channels of successful endeavor.

In certain schools the necessary readjustments are already fairly under way. They have not been made in the light of any general considerations, such as those already set forth, but on account of the immediate requirements of the local situation, thru the instinctive tact, sympathy, and good judgment of teachers in perceiving and meeting the concrete wants of children; or, if originally suggested by theory, have long since lost any merely theoretical character thru the test of application to working conditions.

The opportunity then, and the demand, is to gather together material of this sort, to sift and compare it so as to see the direction in which it is moving, the principles which are embodied in it; and then to present the results in such fashion that most successful attainments of the few in adapting the work of the school to the needs of child life shall become available for all.

II. *Method to be pursued.*

1. It follows from this survey of the relation of the proposed investigation to the existing educational situation that the discussion should be inductive and experimental rather than dogmatic or deductive; it should be an inquiry, not a mere exposition. It is no reflection upon the existing science of pedagogy to say that it is very far from being in a perfect condition, even as regards its more general principles. Even these can be assisted in their development by being brought in touch with the experiences which have resulted from the sympathy and practical intelligence of our best teachers. Pedagogy, as a science, cannot afford to despise that direct contact with experience which fructified all other sciences.

Aside from this, lack of general principles may exist, and yet be practically useless thru lack of adaptation to the day-by-day work of the school. There is too frequently a yawning chasm between the realm of general principles and the details of school routine. While professedly and officially the latter may be regarded as derived from the former, as matter of fact, they may be, in large measure, survivals due to the mere inertia of custom, or empirical devices having no justification beyond their success in accomplishing some external and temporary result; or they may be evidences of the persistence and energy with which some educator has imposed his particular notions upon the school system — products of one of those waves that periodically roll across the country.

What is needed from the standpoint of general pedagogy is that the routine work should be really illumined and interpreted by organic connection with general principles, while the general principles need to be vitalized, kept fertile and flexible, thru adaptation to detail. Our most pressing need is to escape from the current dualism between general principle on one side, and empirical routine and rule of thumb detail on the other. Such an investigation as that here suggested cannot fail to promote this vital interaction of theoretic principle and practical detail.

After the conquests of the inductive method in all spheres of scientific inquiry, we are not called upon to defend its claims in pedagogy. The burden of proof certainly lies with those who would proclaim in advance the sterility of such a mode of procedure. What would be thought of the botanist who should refrain from a study of concrete plants and their parts, on the ground that he could collect merely a multitude of empirical details which would be scientifically and practically valueless? Such a position can only

argue a distrust of the general principles which are nominally professed. The more tenaciously one holds to the general principles and their value, the more sure he may be that an investigation of the most successful educational work will bring to light those principles, not in bare abstract form, but clothed with the authority of operative success; not as universals separated from practice, but transfigured thru their embodied application in effecting their ultimate purpose — the life development of the child.

2. There need be no hesitation in admitting that it will be a matter of considerable difficulty properly to organize and to present the results attained in this inductive investigation. Two extremes, equally dangerous, would have to be avoided. On one side there is the danger of reading into the collected material *a priori* principles, thus reducing the material until it fits into the rubrics of preconceived ideas. Such a method would give the appearance of organization, but would be fatal to the whole undertaking. On the other side there is the danger of presenting a crude mass of undigested particulars without reference to principle. This would merely overwhelm teachers by the mere bulk of data amassed; or, if used by them, would be likely to lead only to imitation of the letter without insight into the spirit.

While admitting the possibility of such misuse of the material, the committee by no means thinks this result probable, much less inevitable. Certain principles may be suggested which tend, in the first place, to control the amount and character of the data collected; and, in the second place, to assist in its proper interpretation.

(*a*) With reference to limitation on the side of material collected, the following principles may be laid down. The traditional routine of the school is taken for granted. So far as this is inquired into at all, it is (as will be indicated farther below) simply for the sake of indicating the conditions under which other work is done. The inquiry presupposes the running of the existing school machinery as found in the average, or more than average, American community. In thus taking it for granted, the inquiry is relieved of the necessity either of justifying or of attacking it. The only question is as to the special use of this machinery in the one direction of furthering, instead of restricting, the immediate life experience and vital growth of the child. This limiting principle allows us at once to rule out an immense amount of detail which would otherwise tend to congest the inquiry and obstruct its systematic interpretation. Such material is indeed valuable, but it is not relevant to this particular inquiry.

Another application of this limiting principle may be indicated as follows: The inquiry has nothing to do with school methods or devices from the standpoint of facilitating the mastery of a given subject. Here, for example, is a school which is unusually successful in securing ability to read at an early age. Here is another noted for its success in enabling children to manipulate number with unusual dexterity and accuracy. With such matters the proposed investigation has absolutely nothing to do. Inquiry into the relative merits of the phonic, word, and sentence methods, or of any variation of these, or of this or that particular method in arithmetic, lies quite outside of its view. It is well to have such matters taken account of, and made known to the public thru the medium of educational journals, etc.; but the aim of the proposed investigation is to discuss methods from the standpoint of enlarging and enriching the immediate experience of the child, not of furthering the acquisition of knowledge or of school arts. This principle restricts the amount of data available by defining the precise kind wanted. As respects reading and writing, for example, not that is relevant which tells how the child learns to read most rapidly and accurately, but that which indicates how the capacity to read is utilized in the moral development of the child and in enlarging his horizon. What is there in the school life and methods of instruction which promotes the reading of good literature, and which facilitates the application of what is read to the child's own growth? So in arithmetic, not methods of teaching number are important, but the ways

in which the child is led to conceive and utilize number relations in enriching his every-day experience.

The same general principle may be applied to any theory. Suppose, for example, it is the matter of correlation. Here the problem for consideration is not success or advisability of correlating one subject with another, but vital connection of the subject with the life of the child as it shows itself at home and on the playground, in his daily, non-scholastic occupations. It is not correlation of geography with history or with arithmetic which is in question, but correlation of geography with the child's daily experience in such a way that the instruction of geography grows out of it and in turn illuminates and interprets it.

(*b*) There is, moreover, a limiting principle on the side of organization of results. The whole question is that of organic relationship to the development of the child. While we are far from knowing as much about the latter as is desirable, we are, thru the development of physiology and psychology, now in possession of certain general principles which will serve as touchstones for the material collected. After it has been found *that* certain methods and materials actually facilitate vital growth of pupils, much can be done in telling *why* they do so. It is quite probable that these psychological principles could not have been applied in advance to prophesy or to deduce such results. But the results, once presented, can be thrown into relief and illuminated by means of psychological principles. The results obtained are, we may repeat once more, largely the immediate outcome of the instinct and sympathy of individual teachers. But once attained, they can be restated and interpreted in the light of larger principles, even tho the latter would originally have been quite impotent in obtaining them.

It is not meant, of course, that this work of interpretation is to become a dominant factor in the final presentation. The psychological principles are to be used rather than exhibited. They are to be used in giving the material a coherent and orderly arrangement along lines which will enable the teacher to grasp the salient features of the methods reported upon; and, by getting insight into the reasons for their success, be freed from the necessity of servile imitation. Thus the confusion attendant upon the mere accumulation of data will be avoided; and other teachers, by grasping the results reached in their organic connection with the principles of mental and moral development, will be able to utilize them freely, by making adjustments freely to the needs of their own particular situation.

III. After this survey of the general character of the proposed inquiry, and of the spirit of the method in which it is to be undertaken, your committee would make certain suggestions regarding the practical methods of carrying it out. Under this head we shall have something to say concerning both the administrative conduct of the inquiry and concerning the particular points to be got at upon the educational side.

A. *Administrative aspects.*

1. The investigation should be undertaken by a committee possessed of complete discretionary power, under the limitations of the particular task imposed upon it by your body. This committee should be large enough and varied enough to secure representation to a variety of points of view, not only of pedagogic theory, but of practical experience. Moreover, it should be wide enough to take in the entire country.

2. While a large committee is indispensable in order to meet the needs outlined above, there should be a smaller central committee in order that the inquiry may be prosecuted with system and method. This should serve as a directing body from which instructions could proceed, to which reports could be made, and upon which should fall the responsibility of final collation of results.

Accordingly your committee would suggest some such scheme as the following: A committee of thirteen to be appointed, of whom four shall constitute a central committee,

while the other nine shall be district representatives selected from particular geographical units in such a way as to cover the whole country. Each one of these nine district representatives to be regarded as a chairman of a subcommittee, and to be authorized to appoint district conferees to enable him successfully to prosecute the necessary inquiries in the region assigned to him. The central committee should act upon the data thus turned in. The inquiry should occupy at least two years, and the possibility of an extension to three should be definitely contemplated. The inquiry should be prosecuted patiently and persistently, with sufficient time for collection of data and their subsequent collation, or else it will be useless. In order to accomplish this, the National Educational Association should be asked for an appropriation for the expenses of the committee. The sum should be sufficient to cover, for the first year, the services of a stenographer for the central committee, expenditures for printing, postage, etc.; and the second year enough to cover the same items, together with the services of a secretary, who, under the direction of the central committee, should carefully work over the material.

B. *Educational aspects.*

Your committee has given more time and thought to considering the details of the proposed inquiry with respect to the points upon which information should be sought, than to all other things. The committee has been subdivided and various portions of the field assigned to various members. Superintendent Jones has taken the general conduct of the school in relation to child development; Superintendent Dutton, the æsthetic phases of school work and the relation of the school to other educational factors of the community; Miss Arnold, the subjects of the primary curriculum; Mrs. Putnam and Miss Brooks, the general spirit and conduct of kindergarten and primary work, both in themselves and in their vital adaptation to each other. After consultation, it seemed wise to throw the points for investigation into the form of specific inquiries preceded by a brief statement of the general problems involved. A conspectus of such statements and inquiries will follow. This will constitute the real heart of this report. To this the foregoing statements are preliminary. It will indicate, with as much definiteness as we have been able to attain, in advance of any actual investigation, the main lines along which work should be directed. As developed by any committee your body may further appoint, it will set the main topics for investigation.

QUESTIONS BEARING ON THE PROPOSED INQUIRY

In current civilization there are growing demands upon the school for increased vital connection of the school work with the requirements of this civilization.

There are evidences that teachers in their work are responding with varying success to these growing demands.

Analyzing in a large way, the efforts of teachers may be grouped as follows:

1. Efforts to base the work of the school upon the pupil's experience.

2. Efforts to systematize the extra-scholastic experience of the pupil, and to supplement this with an ideal experience that shall lead him in his life onward and upward.

3. Efforts to secure the completion of mental acts in actual achievement, thereby fixing them in his organization, building up character, as well as purifying and enriching heredities.

4. Efforts to utilize character so gained and to secure for it attributes of devotion and benevolence by expanding individual purpose into social purpose; directing individual purpose-life deliberately toward healthy co-ordination with the needs and aspirations, the ideals and destinies, of social groups.

The opportunity and the demand are to gather together material of this sort, to sift and compare it in order to find the direction in which it is moving and the principles embodied in it, and to present results in such a fashion that most successful attainments of the few shall become available for all.

This is the purpose of the proposed inquiry, which is to be strictly inductive and experimental.

Such inquiry includes consideration of matters relating exclusively to the traditional school routine, of special methods and devices, of correlation of studies and discussion of psychological principles.

Yet such principles may be used in giving the collected material a coherent and orderly arrangement along lines which will enable the teacher to grasp salient features of the work reported upon, and to get insight into the reasons for their success, thus freeing him from the necessity of servile imitation.

FIRST SERIES

1. What is done to ascertain the general knowledge and skill of the child on entering school? the character of his home environment? his tastes, predilections, disposition, hopes, and aspirations?

2. To what extent and in what ways does the school consider, utilize, encourage, modify, or correct these things?

3. What efforts have been made, and with what success, to organize the interests of parents in the schools?

4. In what ways does the school utilize the observation of things and phenomena on the part of pupils, in and out of school, in the preparation of lessons and in recitations?

5. How does the school utilize unusual occurrences and interests in the work? How does it utilize public festivals?

6. To what extent are play, and other school exercises partaking more or less of the character of play, used for idealizing and extending the child's knowledge concerning the industries, commerce, and other phases of community life?

7. What uses are made of school excursions? of travel on the part of individual pupils?

8. Please state your experience with school gardens and window gardens. Are there other opportunities for the care of animals and plants?

9. In what ways does the school consider the child's scope of æsthetic appreciation, and stimulate the same for further extension, in the adjustment of his school environment? in the ornamentation of grounds and buildings? in the selection of photographs and engravings, etc.?

10. What opportunities are afforded in the school or elsewhere to hear good music? How does the school utilize these in its work?

11. To what extent do stories told the children rest upon their own actual or probable experience? In what ways are they used to stimulate observation, research, imagination, purpose, and aspiration?

12. In what ways is the child's home, community, and school environment utilized in primary lessons in number? form? nature study? language? drawing? reading and writing?

13. In what ways does the school utilize experiment and more or less independent research in securing data and in the formulation of general facts or laws?

14. What progress has been made in equipping the school with workshops, laboratories, and school gardens?

15. What progress has been made in equipping the school with drawing outfits, musical instruments, libraries, and reading rooms?

16. In what ways do the various studies and exercises, as carried on by you, stimulate original investigation, a spirit of research, æsthetic appreciation, and a healthy imagination? Please answer this question more particularly with reference to reading, form work, and nature study.

17. What is the character of reviews? How often are they held?

18. Please send samples of written records of the pupils' and teacher's work, plans of observation, course of study, time-tables, and specimens of children's work.

SECOND SERIES

1. In what ways are the gains of one lesson utilized in other lessons or exercises? number and form in constructive work? the pencil and brush in nature study, essays and reports, geography and history, etc.? stories, reading, and language in consecutive, orderly narrative, description and report work — oral and written?

2. In what ways do you use kindergarten occupations, devices of "busy work," as well as, later on, the sloyd room and the laboratory, in applying knowledge and skill gained in various subjects to particular ends?

3. In what ways are such occupations used by you in stimulating and educating inventive and creative power? in descriptive and illustrative work?

4. Which of such occupations, as used by you, have a direct bearing on number work, form study, nature study, language, etc.?

5. How far and under what circumstances is it found helpful to correlate singing and instrumental music with games, marches, with other studies and exercises?

6. In what ways does the school utilize in its work special ability on the part of pupils in oral or written expression, as well as in technical skill or art skill, for purposes of instruction, recitation, or other legitimate school work?

7. To what extent are the pupil's creative impulse and his own ideas considered in his progress toward the appreciation and control of conventional art forms?

8. By what means do you associate and stimulate a tendency to read books with a mastery of the art of reading?

9. What specific school festivals are established, and how is the work of the school related to them?

10. How is continuity of progress secured within each class and thruout the school as a whole?

11. What are the tests of advance? How often and under what circumstances are pupils advanced into higher groups or grades?

12. What means have been employed to secure continuity of effort and result between the kindergarten and the school?

13. How are marching, changes of classes, etc., managed so as to secure spontaneous good order, avoiding the establishment of a purely formal routine with arbitrary motives and penalties?

14. How are punctuality, the requisite balance of silence and communication, cleanliness, regard for school property, and other school virtues, secured on a similar basis?

15. What evidences are there that the influence of the school upon the development of the tastes, æsthetic appreciation, disposition, and aspirations of the children is felt in the homes and in the community at large?

THIRD SERIES

1. What is done in the general organization of the school to foster community spirit? to make the children feel at home? to make each child feel that he has a place in the school as a community, not simply with reference to lessons learned?

2. What opportunities are there for responsible leadership and co-ordination on the playground? in the school garden? in the ornamentation and care of the schoolroom, and of other children? on school excursions? on the way to and from school, etc.?

3. How is the recitation conducted so as to furnish motives and opportunities for interchange of experience and knowledge for the benefit of others, instead of serving merely as a test by the teacher of information acquired?

4. Under what circumstances and conditions, both as to pupil and subject, do you teach individually, in groups, or in classes?

5. How and in what exercises are children given an opportunity to enrich individual work thru an equitable exchange of products of their labor, more especially in manual work?

6. How and in what exercises are children given opportunity to contribute products of their individual, chiefly manual, work to higher social ends?

7. What opportunities are children given to become actively interested in the work and pupils of lower or higher grades?

8. How and to what extent do children contribute by their art work or otherwise to the ornamentation of the school?

9. In what ways are kindergarten occupation, sloyd, the workshop, or laboratory used for co-operative work?

10. How and in what studies or exercises is division of labor secured, both in the preparation of lessons and in recitations, in research, and in applying knowledge and skill to common ends?

11. How and in what exercises do you utilize independent reading and individually prepared written reports in social school work?

12. When and to what extent are choral and orchestral features introduced in music? What influence do these exert upon the social atmosphere of the school?

13. In what ways are school festivals utilized in developing the social spirit of the school?

14. Are there evidences that attention to social phases of school work exerts a beneficial influence upon the development of strong, self-reliant individuality, coupled with a practically and intelligently benevolent attitude?

15. Are there evidences that the school, by its attention to social training, is exerting a beneficial influence upon the social tastes and tendencies of the community, or, at least, of the younger members of the community?

THE MISSION OF THE ELEMENTARY SCHOOL

BY PROFESSOR MARTIN G. BRUMBAUGH, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

By common consent, students of education are taught that the movement in education is from the thing to the symbol, from sensation to conception, from the real to the ideal, from the concrete to the abstract, from the letter to the spirit, from the realm of sense to the realm of reason, from individual notions to general notions; that the educational process is a self-enthused movement from the things of sensation to the exercise of practical and theoretic reason.

But in our practice all these maxims are rendered relatively valueless, and even mis-

leading, since they figure an ideal process from its initiative to its culmination. In theory we take account of the whole process; in practice we never can begin the process of education. Any attempt to do so results in such a senseless over-concentration of our curriculum as to make us sponsors for the first nervous reactions to external stimuli that sweep the round of sensory and motor activity. In our efforts, therefore, to become scientific, i. e., to realize our theory, the elementary schools suffer today from a disease that, for want of a better characterization, may be called *over-concretedness*. The child has grown into an educative being. Our methods strike him dead in order to force his resurrection after some self-selected scheme of educational doctrine.

On the other hand, we do not follow the child to the realization of the ideals figured as the culmination of the educational process. Hence in many upper grades there is an opposite evil almost as fatal — *over-abstractedness*.

This evil is not so apparent, since so few attain the highest stage of organized training. But the effect is felt in the elementary school. Here all sorts of facts and truths are minced into such concrete bits that the sensible and normal child is disgusted with the whole business of education, leaves the school with a yell of delight, revels, even in school hours, in the secret haunts of bird and bloom, and drives parents and teachers to legislative relief in laws for compulsory attendance.

True, indeed, for all constructive purposes, mind must begin with the concrete and the one; but it is wonderful to note how, in spite of courses of study, schools of pedagogy, and multiplied apparatus, the child spirit gets awing and away from sense symbols. A child can think. A child does think. He needs no more exhortation to think than he does to eat. He enjoys the prolonged exercise of both processes. What he does need are right objects and right methods of thought. To impart right method to his thinking, and to apply this to things that fecundate, is to train the child in the theoretic and the practical reason, to create both a nature and a form in education, to impart knowledge and culture, and thereby to achieve an ethical product.

For the child, at least, the things of thought are best shaped in the feeling life — the neglected life — of the child, and his methods of thought, in spite of rigid discipline and logical method, will follow the trail over which his feelings have swept full, free, and purposeful.

It follows that the feeling life of the child, the first fruit of his intellectual activity and the best, since this directly makes for the ethical end, is of prime significance in any scheme of elementary education. This feeling life must be trained, not ignored. The first thing the elementary school must accomplish is the training of the feelings.

Since the days of Rousseau we have been endeavoring to make character, determine will, by training the intellect. Altho our psychology still deals with the emotions "in a very solemn way," our processes do not take emotional activity seriously into account. Indeed, any attempt to advance the feeling life is regarded as a direct assault upon the accepted thought-producing function of education. Children are exhorted to think. Pedagogs plead for power to think. We no longer exhort or train children to feel. Thus a false antagonism has arisen, and the clamor of the practical world is responded to by eulogizing schemes of thought exercises, and almost no effort is consciously directed to the cultivation of that warmth of interest and intensity of feeling which constitute the basis of all felicitous educational processes, the material of all intellectual advancement, especially of all training that makes for character.

We have created a pedagogical child, and we study it. We have lost the real child and the secret of his unfolding. This pedagogical child is a complex of philosophy and pedantry. It is the dream creature of visionary men and women, who spend their days and nights evolving schemes for evolving it. And as the thing itself has no existence in fact, so the theories based upon it have no direct reformative or pedagogic value.

All educational systems, great in application, were fitted to the real child, educating him for a specific purpose in a definite, if not always consistent, way.

Balzac in *Une Fille d'Ève* gives a description of the depressing education given by the countess of Granville to her two daughters. To make smooth their path to heaven and husbands, she subjected them to a régime that had at least one fatal defect — it took no account of the emotions. The result may be gathered from the story. But have we not today mothers and teachers who pursue systems of education at the cost of the pupils' emotions, that is to say, at the cost of their real happiness? We do not take account of these emotions, which are the highest part of our nature and are most impressionable in childhood.

The world of the useful is to us the world of fact. But fact has to be transmuted by the imagination before it can reach and act upon the emotions. What we need is an educational system which parallels the appeal to the mind thru facts with an appeal thru the same facts transmuted by the imagination.

In the early church schools the emotional life of the child was appropriated to religion. It was conserved for the life to be, and the meager intellectual culture of these schools was designed to organize the feeling life for action in religion. When the layman triumphed over the ecclesiastic, this emotional life was left to seek along its own avenues, by chance and accident, the comfort and strength its repose in religion gave to it, and the energy of the school was devoted to a keen intellectual awakening, resulting in a biased and, in many cases, unfortunate training. If the ideal is to shift from the life to be to the life that is, from religion to some current interest, from living to die to living to live completely, we must still utilize all the energy of the child. We must recognize the emotional life as the basis of appeal for all high acting and high thinking. We can never make men by ignoring an essential element in manliness. To live well, we must know clearly and feel keenly and act nobly; and, indeed, we shall have noble acting only as we have gladsome action — action inspired of feeling and not of thought. The church made men of great power, because it made men of great feeling.

The same is substantially true of the great Greek system, prior to the days of the Sophists. The child was trained to feel devoutly. His enthusiasm for things mounted, in its personified aspects, into religious ardor, and his love for his state became the passion of his soul. This was the state-intoxicated man. Banishment was worse than death, and service to his state the crowning act of his life. His matchless art and his exaltation of the sacred Muses are but the symbolism of a patriotic spirit, of a spirit trained almost to ecstasy in the palæstra and the gymnasium and the agora. His educational progress was measured by devotion, not by acquisition.

Over against this, modern education is becoming more and more intellectual, less and less æsthetic; and the cry of the pedagog is: "How can we make education more ethical?" How, indeed, when the very element that makes for ethical living is decreasingly significant in our educational schemes?

For keen intellectual training in the college and the university we will all plead. The career of the specialist is by no means to be decried, nor the means of its attainment to be attacked. But in an elementary school, by reason of the nature of the child, and also for the sake of purely intellectual training in the university, the educational process should enkindle in the student an increasing warmth of feeling, a keener emotional response to the things of the curriculum.

Plato is the author of the maxim, so much respected by the Germans, that "The feeling with which education begins is wonder." This comprehends the entire problem. Education begins in feeling, continues in feeling, ends in feeling, provided only that wonder is not destroyed, but organized into all forms of beauty in art and into all orders of truth in science.

This discussion leads to the exaltation of the imagination of the child in his early educational career. This is the child's most dangerous power, because most intimate with heaven-ordained sympathies. It is the intellect's reporter of the feeling life. It is, indeed, the feeling faculty. It must be active. If not trained to organize the feeling life of the child into crude material for intellectual functions, then, unfortunately, but surely, it feeds upon the self-created chimeras of an undirected spirit, and dominates the whole life of the child, predisposing him to weakness and positive immorality. Laurie has well said: "The leading idea which shall give us at once guidance and a criterion of judgment in the elementary school is nutrition of feeling, inner and outer; that is to say, of the emotions within and the realities of sense without, and thru these training, with a minimum of discipline."

The second cardinal purpose of the elementary school is to *enrich the child*, and this will be best done in a system that provides as carefully for reflective activity as for expressive activity. Today we assume in our practices that a change of expressional activity is promotive of educational progress. That the child must be busy is true; but that he must be everlastingly at the busy table fingering things is not true.

Too much cannot be said for those contemplative and meditative moods into which childhood at some stage of advance is sure to enter. Shall we rudely break in upon the sacred communion, and drive the child to expressional features of school work? Shall we drag the pious devotee, who on his knees before the crucifix is communing with the invisible, from his vision splendid? Let us learn that the soul of childhood caught in the meshes of a great emotion is struggling and strengthening; that it shall finally break from its reverie, joyous, vigorous, free; that the soul in meditation is indeed enchrysalized and shall in due season arise iris-tinted, enfranchised, and glorified.

The nearest approach to this is our attempt to enrich the curriculum. Our best way to enrich the curriculum may be the best way to impoverish the child. The child is taught too many subjects in the elementary school, and the immediate need is not enrichment by correlation but by simplification. Are we not ripe for a gospel of extermination, to the end that enrichment of the child rather than the text may speedily come to pass?

The greatest gift the child receives in the elementary school is the gift of language — the power to talk, to write, and to read simple English understandingly, and to spell common words accurately. We speak eloquently of patriotism, but often forget that we make patriots only as we make lovers of our fatherland and lovers of our mother tongue. Since so large a percentage of our citizens obtain all their scholastic training in the elementary schools, it is essential that these schools give to the American child insight into the American life by means of the mother tongue. In the first years in school absolutely nothing should crowd into the curriculum to interfere with this language mastery. The only co-ordinate study — and that only as an occasioner of language — that needs serious recognition is such an acquaintance with objective things, thru *nature study*, as will engender in the child a sincere love for the things of nature. If we change our course of study from an intellectual to an æsthetic basis, the child will love what he now crudely knows, and this love of his early career will by transformation become the organized scientific knowledge of his advanced years. The basis must be sympathetic, not scientific. This warmth of interest will make pleasant, make easy, make speedy the advance of the child thru the whole range of his effort.

"It is," says Bishop Spaulding, "better not to teach than to weary." "Sowers, reapers, and gardeners, hunters, fishermen, and the feeders of flocks, are the best society for boys." And the enthusiastic observation of golden grain, springing grass, bursting bloom, flowing streams, happy flocks, and changing sky, are the best sources of inspiration for the whole educational process. The memory of these in years of maturity is attended by a warmth of interest that makes the hand more cunning, the brain more vigorous, the soul more noble.

This free activity and perfect play of emotional energy is suddenly suppressed when the child enters school. He is restrained where formerly he was free, and urged to activity to which before he was a stranger. School becomes distasteful to him. He needs in this first restraint the greatest care, the warmest sympathy. Keep his heart warm for the things he loved of his own choice, and link the new lovingly with the old. He should grow in feeling as he grows in knowledge. Indeed, the very source of his inspiration is to be found in the fact that he feels that he knows, and not that he knows that he grows.

A few years ago I saw a German schoolmaster, staff in hand, leading a score or more of boys along a winding stream, under towering trees, in the heart of the Thüringer hills. And what a scene! Teacher calm, communicative, contented; pupils leaping with the waterfall, singing with the birds, shouting with the breezes, running with the shadows, happy because in a school that fed the emotions and exalted the spirit.

All this rich contact of knowledge should be incorporated into chaste language. Accompanying this process of spiritual transformation of things into symbols is the duty of creating in the child a desire to share in the larger life of the race thru language. The child that comes to feel that the language symbol is the barrier between him and rich treasures of warm human experience will early find a breach in the wall and enter. No set method will be required. He will learn to read, and he will read in spite of the method; and, after all, the only permanently valuable method of learning to read is the method that will compel the child to read — that reveals thought and quickens the appetite for it. In this way learning to read is not a task, but a necessity. One compasses the processes for the same reason that he climbs a mountain — to get the broader view the new point of vantage affords. The child that reads is intellectually emancipated. The question of citizenship in the republic of letters is settled; the location and character of his activity are solely matters of detail.

This will not wholly satisfy our modern attempts to put into the elementary schools the beginnings of all studies. Why should every human interest find representation in the elementary school? Is the child to act forever only upon the data of his school life? If we taught less, would we not teach better? An overwrought curriculum produces stupidity. The elementary school does its best work when it creates *the desire to learn*, and not when it satisfies the learner. The best school is the one that sends the child into life eager to know and equipped to learn. We are too much concerned with immediate results. We lack the teleologic spirit, and count as lost all that which fails to flower and fruit in a day. The best products of a good school are ripened and garnered in the larger life which we denominate "after school." Our need, then, is a training that will make books, the reading habit, the permanent concern of the adult life.

The smartest child is not always the noblest citizen, nor will this land be stable and free, stable in its freedom, until the elementary school, the school of the masses, sends forth a product that will love books and spend the evening at home, in the family circle, in the intimate enjoyment of good reading, and not at the barroom, the country store, or the club.

Shall we longer retain in our practice the unclean spirit, long since cast out of our theory, that education is measured by the number of facts imparted; that progress in education is only and wholly a quantitatively measured thing; that quality is of no moment? Shall this be required of the schools, while we teach in our pedagogical institutions that culture, in any stage of advance, is worth more than knowledge, and shall the hypocrites flourish?

If the mental reaction, the creation of nerve tracts, the blazing of the trees along the new route until the incoming idea can run and not grow weary in its rush along a habit-hedged way to its own apperceiving mass, is essential to educational advance; if, like the prodigal, the new idea is to return each time to its own apperceiving progenitor and help swell the fatted feast — there must be time for repetition and for elaboration, that the new

idea may be "at home," and that the old dwellers of the same sacred cell may see enough of it to bid it welcome, to use it, and to be of use to it.

For the mastery of the number symbol, and elementary lessons in hygiene, history, geography, and related studies, no plea is necessary, since these are today overtaught, and in no organization of elementary education are they likely to be undervalued.

Are we not fundamentally foolish when multiplication of facts is accepted as enrichment of mind? Have we not listened to false gods, to the mercenary spirits that measure all things quantitatively, instead of practicing what we know to be everlastingly true — that the sum of knowledge gained does not render the mind versatile? And yet versatility is the best characteristic of a mind equipped for active life.

There is yet one other consideration to be borne in mind. The elementary school ought to foster the elements of true virtue by giving the child an insight into the elements of the higher life.

Politeness, conscientiousness, and humility (which trinity of powers Rosenkranz declares to be the basis of the religious life), these factors should be constantly and carefully fostered, even to the exclusion of much from the curriculum. For these the child is naturally eager. His properly trained feeling life will intensify this natural desire and make, provided time and sense condition their acquisition, his days in school his *happy days*, back to which in years of worry and toil and trial he will turn with a warmth of feeling and a depth of meaning that will render his school days a glad memory and a perennial source of comfort and strength. It will do away with a thousand testimonies to the justice of the lament of St. Augustine: "O God, my God, what misery did I then experience when sent to school! when I was told that it was as a boy my right course of life to obey my teachers in order that I might get on in this world and excel in those arts which lead to human honors and false riches. Then I was put to school to learn things of which I, poor boy, did not know the use; and yet, if I was slow in learning (because of this lack of knowledge), I was flogged, for this course was held in high repute by my elders, many of whom before me had trodden the same road and had marked out a wearisome path along which I was forced to go; thus multiplying the toil and pain of the sons of Adam. . . . . As a boy I began to pray to Thee; and I used to ask Thee, with no little earnestness, that I might not be whipped at school. I had a great dread of these sufferings and prayed earnestly that I might escape them; and yet I incurred them by not writing, reading, or minding my lessons so much as I was bidden. For memory and ability were not wanting to me, O Lord, but I delighted in play, and was corrected for his by those who did the same."

The elementary school fulfills its mission, then, by training the feelings; by such a simplification of the curriculum as will give the culture side of education greater prominence; by emphasizing the mastery of language as the central possession of the child; by an intellectual versatility, the best mental equipment for life; by promoting the virtues of politeness, conscientiousness, and humility; by giving greater prominence to the permanent rather than the transient results in teaching; and by placing in the elementary schools teachers so thoroly trained and enthused with the ideals of the school as to render the school career of the child marvelously successful by making it supremely pleasant.

WHAT CAN CHILD-STUDY CONTRIBUTE TO THE SCIENCE OF EDUCATION?

BY PROFESSOR J. P. GORDY, COLUMBUS, O.

A preliminary question must be answered: Is a science of education possible? We all remember Professor Dilthey's answer to this question, as expounded by Professor Royce

in the *Educational Review.* Professor Dilthey says there neither is nor can be a science of education, and for two reasons: (1) the end of education cannot be defined in such a way as to be true of all peoples and for all times, unless the definition is stated in such general terms as to leave the question it attempts to deal with, to a large extent, open; (2) because the material upon which the teacher works — human nature — cannot be adequately defined in general terms, because each individual, by virtue of being an individual, is more than the type with which alone science is capable of dealing. In brief, we can have no science of education because we can never know in detail either what human nature is or what it ought to be.

It may seem at first sight as tho this kind of reasoning would lead to the conclusion that there neither is nor can be a science of anything. Says Professor Dilthey: "We have no science of education because wide differences as to the end of education have appeared among different nations, and in the same nation at different times; because we do not agree among ourselves except in the most general way, and because what we now regard as the end of education may not be so regarded a hundred years from now." May we not say with equal truth that no science of biology is possible, because what we now regard as its fundamental law — what is at any time regarded as its fundamental law — may not be so regarded a hundred years later? Such a reply to Professor Dilthey's first argument seems to me unanswerable. All of our sciences, in so far as they deal with concrete fact, consist, not of absolutely proved laws, but of what may be described in the last analysis as good working hypotheses, because they explain all the facts now known in that field to the human race. The possibility always remains that the accepted law of today may prove to be the exploded hypothesis of tomorrow. To say, then, that there neither is nor can be a science of education because we do not agree among ourselves as to what the end of education is, and because, in so far as we do agree, we may find ourselves in disagreement with the next generation, implies such a conception of science as would lead to the conclusion that we have no science of anything except in the department of pure mathematics.

But Professor Dilthey's second argument rests on different grounds. "If there is a science of education," says Professor Dilthey (and here Professor Royce agrees with him), "it would consist, in part, of such a complete and systematic knowledge of human nature as would furnish a complete set of rules for the guidance of education in a given case. In so far as a teacher has to deal with particular cases — not by means of his general knowledge of human nature, but by means of his insight into these particular cases — in so far he must be guided by knowledge which is not scientific in its nature. In so far as the teacher must for all time be guided by his insight into particular cases, in so far he must for all time be guided by unscientific knowledge." If it is true that the teacher's general or scientific knowledge of human nature is, and can only be, useful in so far as it sharpens his insight into particular cases, then it is true that we neither have nor can have a science of education. Whoever admits that the teacher is, and forever must be, guided by his insight into particular cases agrees with Professors Dilthey and Royce. Says Professor Royce: "Rules would here be suggested by the science at every point; yet they would never be rules that the educator could immediately apply, except with constant reference to conditions of his own nation, age, and child: Universal these rules would be, yet never universal in the sense that they might be taken as precise guides in the particular case. Aids they would be, but never substitutes for personal insight. In short, our knowledge of laws would be a good staff and a bad crutch."

Instead, then, of talking about the science of education, we ought, strictly speaking, to talk about the scientific elements in education — those laws, in other words, which throw light on the business of education. But if, out of regard to usage, we continue to use the term "science of education," we need constantly to bear in mind the

limited sense in which such a science is possible. When, therefore, we ask the question, What can child-study contribute to the science of education? our question amounts to this: What more or less general truths can child-study discover which will help us in the business of education?

Still another preliminary question must be answered: What do we mean by child-study? Professor Barnes seems to me to have answered this question in a helpful way. He describes it as the inductive and quantitative study of human beings. Child-study includes, therefore, what is meant by genetic psychology. Genetic psychology aims to discover the laws that govern the growth and development of human beings. The interests, tastes, instincts, ideals that predominate at different periods in human development, the various capacities that exist at these different periods, and the extent of those capacities, are questions for genetic psychology to answer.

But child-study, as Professor Barnes has defined it, seems at first sight to include more than this. We might say that all study of the adult consciousness by means of the inferential method, all study of the adult consciousness the object of which is to discover peculiarities of individuals which the student could not discover by a study of himself, simply because they are peculiarities, is a part of what has been improperly called child-study. President Eliot, for example, holds that the best way to develop respect for expert knowledge is to make a man an expert along some particular line. Is he right? There is but one way of ascertaining, and that is by an actual study of experts, so as to learn to what extent experts along one line have respect for the conclusions of other experts. So, likewise, Mr. Galton got the notion that the power of people to form vivid, exact, and detailed images of things varies greatly, and he proved that he was right by a study of individuals.

But such study really forms a part of what is called genetic psychology. Why do people differ in the respect which they have for the conclusions of experts? Why do people differ in their power to form vivid, exact, and detailed images of things? So far as such questions can be answered at all, they must be answered by a study of the laws that govern the growth and development of human beings in connection with the history and peculiar experiences of those particular human beings whose characteristics we are investigating; we must say, for example, that this man has the power to form vivid, detailed, and exact images of things, either because of his experiences and his education, or because of inherited capacities; that that man's attitude toward expert conclusions is the result of one or other of the same two causes. But to determine to which of these causes it is due we must have resort to genetic psychology. The question, then, which I am to try to answer is this: To what extent can a knowledge of the laws that govern the growth and development of human beings throw light on the business of education?

We shall find this an easy question to answer, if we bear in mind that the business of education requires as precise a knowledge as possible of the answers to six questions (1) What is the end of education? (2) What instrumentalities ought society to employ for the realization of that end? (3) What subjects should students be required to study? (4) In what order should these studies be taken up? (5) By what methods should these subjects be taught? (6) What amounts of time and energy can students be required to give to work without injury to their health? He who can answer these questions most perfectly; who has the most precise and detailed knowledge of the end of education whose judgment is wisest as to the instrumentalities which society should make use of to realize that end; whose knowledge of the subjects which ought to be taught, the order in which they should be taken up, the methods by which they should be taught, and the amount of time and energy which students are capable of giving to their work without injury to their health — has the largest amount of the knowledge that throws light on the business of education.

I am sure of your assent to this proposition, except in so far as it relates to the agencies which society should make use of in realizing the end of education. But are not questions as to the best mode of selecting state school superintendents, the qualifications to be required of them, the duties to be assigned to them, questions which throw light on the business of education? Has not the business of education a vital interest in the qualifications, duties, and methods of electing boards of education? If we select state school superintendents and boards of education in any way but the best way; if we assign to them any duties except those which they ought to perform; if we require of them any qualifications, more or less, except those which they ought to possess, will not the business of education suffer? Will not the business of education suffer, if society makes a mistake as to the amount of money that ought to be raised for school purposes, or if it undertakes to raise that money in the wrong way? Without doubt, then, a knowledge of the agencies which society should employ, of the mechanism of which it should make use, is a part of the knowledge which throws light on the business of education.

We may, then, consider our question under the following heads: (1) Will genetic psychology throw any light on the end of education? (2) Will it help us to see what agencies society should employ in the business of education? (3) Will it tell us what subjects ought to be studied? (4) Will it tell us in what order they should be studied? (5) Will it tell us by what methods they should be taught? (6) Will it help us to see how much work students can safely be required to do?

1. It seems to me self-evident that genetic psychology cannot tell us what the end of education is. The end of education will be determined for each individual by his conception of man. Start from Plato's conception of man, and you will reach Plato's conclusion: that the end of education is to develop the power to see those divine ideas in the contemplation of which alone true wisdom consists; that those that do not possess the capacity to develop this power are incapable of being educated. Agree with Aristotle that the supremely important thing in man is the intellect, and the supremely important thing in life is the activity of the intellect—and you will agree with him that the end of education is the development of the intellect; that those who have little intellect to develop have no business in life except to serve those who have. Say with certain religious teachers that the supremely important thing in man is his capacity to believe certain doctrines—and you will agree with them that the supremely important thing in education is the development of this capacity. Say with Dr. Dewey that a man ought to have no life of his own, that he lives in and for and by society—and you will agree with him that the education of man should be determined entirely with reference to the needs of society. Agree with the Herbartians that the will is not free, and yet insist with them that the conduct of this human automaton is a matter of the first importance—and you will agree with them that the development of interests—such interests as will inevitably impel the individual to a certain kind of conduct—is the supremely important thing in education What you think of man, what you think of human life, will determine what you think of the end of education. But the science that undertakes to tell us what man is, what his inmost nature is, is philosophy, with which genetic psychology has nothing to do.

2. Will genetic psychology throw any light on the agencies that society should employ for the realization of the ends of education? This question, also, I should answer with an unqualified negative. Such answers as this question is capable of receiving, the so-called science of education will borrow from a study of comparative politics. What methods have actually worked well in this direction? Were there any special conditions in the cases where they worked well to prevent them from working well elsewhere? It is the answers to such questions as these which will tell us all we shall ever know about the agencies which society should employ in the business of education.

3. Will genetic psychology help us to decide what subjects ought to be studied? The true answer to this question can be most clearly seen by considering the principles upon which a choice ought to be made between different courses of study. What you think the end of education is will determine, to a great extent, your opinion as to the subjects that ought to be studied. Suppose you say that the end of education is preparation for rational living; and suppose you say, with Davidson, that such preparation consists of four elements: (1) knowledge — that knowledge of the laws of nature and of life which will enable us to act wisely in the various emergencies of life; (2) discipline — that training of our minds which will enable us to draw the proper inferences from what we know; (3) that cultivation of the emotions which will cause us to estimate things at their proper worth—such a training as will make us prefer to do what is wise; (4) that training of the will which will enable us to do what we think we ought to do — will not your decision as to the subjects that ought to be studied be determined primarily by your idea of these elements? You wish to give your pupils that knowledge which will prepare them for rational living. And what is that knowledge? Herbert Spencer has told us as well as anyone else, and he did not base his conclusions on genetic psychology.

What kind of discipline do we need in order to be able to live wisely? Professor Hinsdale has answered this question for us. He has told us that we cannot acquire the power, for example, to reason correctly about our children by studying politics, or learn how to vote wisely by studying Latin and Greek; that we acquire the power to reason about any thing by reasoning about the class of things to which it belongs. But Professor Hinsdale did not base his conclusions on genetic psychology.

What kind of training do we need in order that we may be able to estimate things at their proper worth, to hate what we ought to hate and love what we ought to love? Plato answered this question with almost ideal completeness. Bring children from their earliest years, he said in substance, in contact with the highest concrete ideals they are capable of appreciating. Teach them to love nobleness, and bravery, and generosity, by teaching them to love noble, brave, and generous men. But Plato did not base his conclusions on genetic psychology.

What can we do to train the wills of our pupils, to give them the power to do what they have decided is wise? I think Professor James has gone as far as anyone else toward answering this question. We must realize, he says in substance, the immense difference between fine feelings and fine actions. We must constantly remember that generous feelings which do not stimulate their possessor to generous actions under appropriate circumstances leave their possessor less generous than they found him, that unselfish aspirations which do not issue in unselfish conduct tend to weaken the will. But Professor James did not base his conclusions on genetic psychology.

4. What light can genetic psychology throw on the question as to the proper methods of teaching? I am not a Herbartian. I dissent radically from the Herbartian doctrine of the will, and consequently from the Herbartian doctrine of interest. I believe that the Herbartian doctrine: that all the studies in the school course may be made a means of revealing moral ideas, and consequently a means of moral training, is not only false, but pernicious. I believe the doctrine of concentration, as many Herbartians explain it, is at war with the fundamental principles of psychology. But, nevertheless, I believe that the main outlines of the Herbartian doctrine as to the steps or stages in the methods of teaching will stand the test of time. But Herbart did not base his conclusions as to method on genetic psychology.

5. Will genetic psychology throw any light on the proper order in which studies should be taken up? Undoubtedly. Altho the end of education must determine *what* is to be taught, the question as to *when* the various subjects we undertake to teach must be taken up manifestly cannot be answered except by a study of children's capacities.

Granted that there are things which a child must know in order to be educated: it is yet evident that the child cannot learn them until he has the capacity to learn them; and there is no *a priori* way of determining when this capacity will appear. Granted that there is a certain training of his powers which a child must acquire in order to be educated: it is evident that there is no *a priori* way of determining when his faculties can begin to be exercised, and how much, in order that this discipline may be the result. Granted that the child must acquire a certain training of his emotions, that he must come to love what is good, and hate what is bad, in order to be educated; and granted, also, that his training can only result from bringing his mind into contact with the noblest concrete ideals he is capable of appreciating: it is evident that there is no *a priori* way of telling what are the noblest ideals he is capable of appreciating. Undoubtedly, the two great questions for genetic psychology to answer are: (1) When shall we teach children the subjects they ought sometime to study, and (2) How much time and energy can we safely ask children to give to this work? This first conclusion is so nearly self-evident that it seems unnecessary to illustrate it. But a little consideration will convince us that, as a matter of fact, we are guided, and always have been, in our decisions as to when the subjects in our courses of study shall be taken up by a sort of empirical genetic psychology. One superintendent would have technical grammar taken up in the fifth year, another in the sixth, another in the seventh; another would have it put off till the high school; and these differences result from their different estimates of the time when the capacity to deal with these subjects appears.

We find illustrations of the same truth when we recall the few valuable results of child-study. In what way have the studies in this country and Europe as to the contents of children's mind been helpful? By showing us what we can teach. What we successfully teach at any stage of a pupil's development must be brought into relation with what a pupil already knows, and studies which help us to appreciate what a pupil knows help us to decide what we ought to try to teach him. Take, again, the studies of Barnes and Wissen on children's interests. The former has shown that young children are interested more in what objects can do, in what they are good for, than in what they are. What does this show? That it is these phases of objects to which we should call the attention of children in the early stages of their development. Wissen has shown that children very soon forget the abstract moral essays which they read — essays in bravery, generosity, and the like — while they vividly remember stories embodying the same moral ideas, and like them because they embody those ideas. The same kind of lesson emerges: We must skip the moral essays, and teach the stories. From every point of view it is evident, then, that genetic psychology can render the so-called science of education very great service in this field. If we have depended hitherto on a purely empirical knowledge of children for guidance in this direction, it must be evident that the more scientific we make our knowledge, the more intelligently we shall be able to determine when our pupils should take up the various subjects of study.

As to the service which genetic psychology can render in helping us to decide how great are the demands which we can safely make of children, illustration is surely unnecessary. All of us understand that the numerous studies of fatigue which have been undertaken in this country and Europe throw light on this important question, and that it is from such studies that we must get all the light upon it that we ever receive.

Summarizing: (1) The question, What is the end of education? must be answered by philosophy; (2) the question, What agencies should society employ to realize the ends of education? must be answered by a study of comparative politics; (3) the question, What subjects should be studied in order that the student may be educated? must be answered by general psychology; (4) the question, What methods shall be used in teaching these subjects in order that they may be made to yield their educational fruit? must also

be answered by general psychology; (5) and (6) the questions as to how much the student can safely be required to do, and in what order he shall take up particular subjects, and how long he shall pursue them, must be answered by genetic psychology.

If these conclusions are sound, they ought to be of value to two classes of students. One class of students has become so disgusted by the vast amount of childish study which has been perpetrated on an unoffending public under the name of child-study, by the serious and pompous announcement of new conclusions concerning children which have been known for thousands of years, and by the equally serious and pompous announcement of conclusions concerning children utterly destitute of significance for the science of education, that they are tempted to say that the entire movement in the direction of child-study has no scientific basis, and can lead to no scientific results. If the conclusions reached in this paper are sound, it is clear that there is a field, and a very important one, for child-study; that questions which have a vital bearing on the business of education can be answered by genetic psychology alone.

But there is another class of students to whom our conclusions, if they are true, should be no less suggestive. This class of students have been so carried away by their enthusiasm for child-study that they feel strongly inclined to elbow out of the educational field everyone who does not believe with them that child-study is the beginning and end of all scientific work in education. Are you engaged in the study of children? these students are inclined to ask. Are you getting up questionnaires for children to answer? If so, you are an original worker in the field of education. But if you are not, you are a quack and a pretender, and the sooner you get out of the educational field, the better. If the conclusions reached in this paper are true, the attitude of this class of students is also to be condemned. For great questions which have a vital bearing on the business of education cannot be answered by child-study.

Our conclusions ought to be of value to this class of students from another point of view. Not everyone that says, Child-study! Child-study! shall enter into the kingdom of educational truth. Pile insignificant fact upon insignificant fact, and you bring not a single stone to the foundation of the science of education. Do you want a criterion to distinguish between facts having a scientific value and facts utterly worthless from the point of view of science? Such a criterion is easily stated. If your facts help to answer questions about children which could not be answered before, publish them by all means; they have a scientific value. But if your facts only tell an already twice or thrice told tale, in the name, and in behalf, of the overworked American teachers, I beg you, keep them to yourselves.

SOME CONTRIBUTIONS OF CHILD-STUDY TO THE SCIENCE OF EDUCATION

BY REUBEN POST HALLECK, LOUISVILLE, KY.

Sympathetic observation of children—in other words, rational child-study—has helped the science of education in certain important ways. Child-study has contributed little that is absolutely new, but it has emphasized certain truths which were only dimly known before, and it has emphasized them in such a way as to make them operative. There are two ways of knowing educational, as well as other, truths. We may know

a truth in a hazy manner, without acting on our knowledge. We hear people assenting to truths every day, without acting on them. Lowell has rightly said: "It is not the finding of a thing, but the making something of it after it is found, that is of consequence." A new definition of knowledge must be framed for the coming century. That must not be called knowledge which has no outcome in action. Child-study has presented some old truths so definitely as to cause action in their direction. A perfect idea always has the motor element strongly developed.

Child-study has quickened the blood in the old science of education by some welcome directions for developing what is potentially in the child. Rational observation of children has shown some of their leading potential capacities, which have not had sufficient nurture under the older education. If we have thru a study of children a clearer idea of their potential capacities, we can certainly educate the child more scientifically.

First and foremost, child-study has shown that the strongest potential capacity is the capacity for action. If teachers reply that it needed no prophetic child student to tell us this, the query must come sharp and quick: "Has your teaching been such as to develop or to throttle this capacity for action? Have you trained children to become men of action in a world of ceaseless struggle, or have you endeavored to paralyze their love of action by feeding them almost exclusively on what Shakespeare has termed 'the alms-basket of words'? There could have been no effective knowledge of these activities, unless they were ministered unto. The majority of teachers have today slight conception of this truth. If you know and love your vocation, feed the activities of your lambs."

Rational observation of children has pointed out the fact that this capacity for action takes chiefly the direction of imitation. One book of 300 pages, on child observation, is given up to *Imitation and Allied Activities.* Before the end of the first year the child has begun to imitate the world around him. He is, consciously or unconsciously, trying by his own activities to create a copy of that world. Everyone who comes within range of that child's senses is his keeper.

Imitative actions leave in the motor-nerve cells an impress or a neural tendency to reproduce the movements unconsciously. A child of twelve months recently imitated the opening and the closing of his father's hand. While the child was sleeping the following night, his hands opened and shut like his father's. Since the child was unconscious, these movements were the result of a new material disposition in motor-nerve cells, which discharged automatically in the direction of former activities. In other words, actions effect a change in motor-nerve cells, and that change is the physical basis of motor memory. Sleeping children have been noticed

moving their limbs, puckering their lips, and scowling, in imitation of parent or nurse.' A permanent modification in the nerve cell is usually the result of imitated actions, which will henceforth tend to become unconsciously persistent. This truth must be of worth in the science of education. These truths ought to make us realize in a new light what is meant by tying a child helplessly to his own past. If we have given the child his fitting birthright, we have during his imitative period ingrained in his very nerve cells a tendency to habitual actions of the right kind. Only such a child is ever enfranchised. He has the lower order of things a matter of neural certainty.

In some respects this age has deteriorated in teaching, and some of this deterioration is due to those who are ceaselessly crying, "Parrot teaching." It is high time for someone to champion the parrot's place in nature, unless it can be shown that the Almighty or nature made a mistake in evolving the parrot and the imitative activities of children. Parrot teaching has its place, just as much as teaching of a different order, and neither kind can take the place of the other. Since physiological psychology has shown us that repeated activities of the same kind are necessary in both motor and sensory cells to effect that stable material disposition which is the physical basis of memory, repetition has held a higher place in memory culture. It is a great comfort to have a brain cell retain something which we did not understand at the time, but which future years of thought make plain, if the memory has only retained the fact until the prime of thought. Many of the child's motor memories have become stable before he can philosophize about movement, or even before he knows the mechanism of the muscles or how movement is produced. Luckily his lack of knowledge does not keep him from forming many motor memories of the right kind, if he only has a good teacher to serve as a model. These memories will be just as serviceable in future time as if he understood them at the time of their acquisition.'

Child-study has shown that the young child's most pronounced tendency is toward imitative action; in other words, toward parrot action. In the face of these facts many teachers are gravely telling us that we must not countenance nature in her mistakes. On what else can we base the earlier education of the child than on his capacity for imitation? If we give the child good models at the start, we need at first care little for the "how" or the "why."

How any child student at all versed in neural laws can decry a large amount of parrot teaching is simply inexplicable. When the child learns the pronunciation of his own or of a foreign language, the more parrot-like he follows a perfect model, the better the result. Language is largely arbitrary. A rose might as well have been called by some other

[1] HALLECK, *Psychology and Psychic Culture*, pp. 133, 143–5, 238.

name. Spelling is worse than arbitrary. Many results of the newer education have been of the uncertain, scattering type. There has been but little absolute neural certainty about the child's acquisitions. In these later years I have witnessed the sowing of the seed for a crop of miserable spellers, and I have lived to see the crop reaped. Good spelling had in the majority of cases required much parrot repetition, and, of course, that would not do. A man brought up under the old method was told that he had in an article misspelled the word "embarrass." "Have I?" he asked of his younger informant. "Confound old So and So! He told me he had grounded me so in spelling that I could never forget, that all I should have to do would be to write ahead without thinking of the spelling."

"Well, you have misspelled 'embarrass;' you have put two *r*'s in it," replied the younger man.

"To tell the truth, I do not know whether the word has one *r* or two *r*'s, but I supposed my fingers could attend to that while I was thinking what to write. Let us look up the word."

A dictionary was procured and the word found, when the elder exclaimed: "Aha! old Parrot So and So was right. Well, I'll continue to let my fingers take care of the spelling, while my brain attends to the thought."

That old schoolmaster may not have known the technical name for motor memory, but he did know better than to attempt to put frills and furbelows on the garment of a child, while the garment itself was a thing of shreds and tatters, which barely hung together.

The only reason that I can see for decrying the development of the child's imitative powers is because some teachers may think that this training, which merely lays the foundation, is the be all and the end all of teaching. A dwelling house is something more than the foundation, and education must build lofty stories of thought on these foundations of imitation, or they will be laid in vain.

Rational child observation, coupled with the study of physiological psychology, has emphasized the fact that, since activity is one of the special characteristics of the child, he should have far more motor training than is accorded him today. Nature, speaking thru the child, says, "Act." The pedagog growls, "Keep still there." Perhaps the majority of the education of today is comparatively of the quiescent type. Motor education for the masses is in this country far behind what it was fifty years ago. Only the favored few, the very few, have a small fraction of the motor training which active life demands. Sensory education has made vast strides of late, and altho this naturally leads to motor development, the motor factor is still systematically repressed.

We have in actual schools two forces directly intended to counteract

motor atrophy, the work in the kindergarten and in the manual training school. The kindergarten keeps the child only a few years, but it does some excellent motor work with him. After leaving the kindergarten, in the majority of cases, he gets no more training of this kind, except what he picks up in his plays and games. The manual training school has recently been established to supply this deficiency. The object is altogether a worthy one. Has it succeeded, or does the manual training school, like institutions of a different type, need changing in certain points? It must be understood that our attitude toward a school with such an object cannot possibly be antagonistic. Our attitude can be only that of a kindly, correcting parent.

We have in this country a number of great technical institutions, which pre-eminently fit young men for action, whether in building bridges and railroads, in working mines, or in turning out and putting in position complex electrical machinery. A president of one of these great technical schools said to me not long since that, after having tried students prepared at a number of different manual training schools, he much preferred the graduates of the English or classical high schools. Such a statement from a man whose duty it is to prepare men for action demands attention. I do not know his personal reasons for this position, but I do know that we cannot decry the right kind of motor training, unless we are prepared to hold that the child's strongest potential capacities exist on purpose to be repressed. Perhaps some light may be thrown on that president's view, when we come to study the magnificent motor training which the majority of our great men of fifty years ago received in the greatest institution for motor training ever conceived.

While up to a certain age nothing can take the place of the education of the imitative capacity, or parrot training, as some prefer to call it, yet such training, beyond a certain point, is certain to dwarf the individual. The child early in life repeats myriad of his motor experiences. What he needs as he grows older is to be taught how to combine these movements into new forms. Just as the same old metals, iron and steel, may be combined into forms as dissimilar as a sewing machine and a fork, just so should the child's recurrent movements be combined in the most dissimilar ways.

Fifty years ago there was not the present crowding into cities. Men like George Washington, Daniel Webster, and Abraham Lincoln had the magnificent motor training of the farm. Our schools have not yet equaled the method of the farm. If there is one kind of training where parrot methods must not be employed after the beginning of adolescence, that kind is motor training. If the boy, during that age, is tied down to drawings, patterns, and models made for him by another, the active side of his creative life will be nipped in the bud. There is nothing else

so dwarfing as this type of motor education. The reason for this will be evident, if we consider what are the results in a growing brain of movements that are not recombined in varying ways. Of course, movements in hands, arms, and legs must be repeated to the end of life, like the letters of the alphabet. The only point to be insisted on is that, to have value, they must be combined in new forms.

An oft-repeated movement makes, in the central nervous system, a path easily traversed.[1] This is only one result. An equally important one needs to be kept before us. Such a movement means not only a facile cerebral path in a given direction, but also a blocking of other paths in different directions. There is positive neural resistance, increasing with advancing age, to the formation of new brain paths. Here is a reason why few persons get absolutely new ideas into their heads after thirty. An idea scarcely deserves to be called the shadow of an idea, unless it goes out in action, and there is strong neural resistance, after that age, to the combination of movements into new forms. It is hard work to teach an old dog new tricks.

In short, well-worn brain paths keep the current of action from finding new outlets. In other words, habitual actions are powerful inhibitors of movements which do not tend in the same direction as the old. Hence, youthful habits of the right kind should not be narrowed to one field. They should be like good roads which open up a fertile country in every direction. Too much specialization in early youth can only have bad cerebral results. A man may wish to use, in later life, chiefly the muscles of his arms, but he had better not neglect the early development of his entire body.

One of the inspectors of English workhouse schools, a type of school that demands constant motor training, says: "The most prominent faults of workhouse boys, being rather of a negative than of a positive character, as indolence, vacancy, stupidity, are such as would be most likely cured by greater freedom of life." The intense specialization of the present age is very dwarfing. Boys go into a factory early and spend their entire lives in making one part of one thing. They cannot help being narrow, stunted creatures. It has been found that certain factory hands do not improve in their output after thirty. At forty-five their productive power has shown a decline of 20 per cent. If we could have before us an assemblage of men of Shakespeare's day, we should be struck with the absence of over-specialized factory hands, those human automatons of modern times.

How does the motor training of the farm differ from that of the school? The various combinations of movement demanded by farm life are almost innumerable. Let it be understood that such movements

[1] HALLECK, *Education of the Central Nervous System*, pp. 100, 101.

furnish the best possible opportunity for training the powers of thought. I do not believe that children can be taught to think naturally in any other way except by movement. The child who does not think as he moves will very soon meet with a painful accident, or be killed and removed to make room for someone who does think as he moves. If a child moves in many varied ways and survives, he cannot help thinking in many varied ways. If he moves in a few ways only, his alphabet of thinking will contain but few letters.

On the farm, varied motor combinations and thinking are in constant requisition. The boy is called on to repair a fence with insufficient materials, to mend a wagon shaft on which a horse has stepped, to fix the harness on the road, to repair a horse rake or a mowing machine, to mend a milk pail, build a hencoop, stop a leak around a chimney, build a wall out of irregular stone, keep the inclined doors of a cellar gangway in position without support, drill holes, rivet things together, patch the roof. It is a great advantage for the boy to have few tools, for he thereby learns how to make ingenious shifts and new combinations of movements. A rule-and-line carpenter would be in despair if he had to fix things under the disadvantages that confront the farmer's boy. The carpenter's training has often been so narrow that he must have everything just so, or he is helpless; for this reason the farmer will frequently not hire him. I once watched the maneuvers of two boys, the one reared on a farm, the other trained in the schools. There was a small table, with two cleats nailed on the under side. A small piece had been planed off the ends of the cleats so as to hold a yardstick just out of sight under the table. The ends of the cleats had swelled so that the space was too narrow for the purpose. The schoolboy got a rasp, but the space was not wide enough to admit it. He then tried his jack-knife, but the grain of the wood ran diagonally across the cleat, so that the knife was making matters worse. He seemed nonplused, but the farmer's boy, who had been quietly watching the operation, picked up a piece of oak board, which he whittled down, so that considerable pressure was required to shove it between the edge of the cleat and the table. He then took a handsaw and began to saw between the wedge and the cleat. Since the wedge was the harder, the saw cut away the cleat. After a few trials, the farmer's boy had the space exactly right for receiving the yardstick. He had combined the wedge, the cleat, and the saw in a new way. No demonstration of a stationary geometrical proposition could have trained his thinking powers half so well. No repetition of movements, planned for him by another, could have made him a self-reliant thinker. The thinking which does not avail when one is confronted by a new and untried emergency is of little worth.

I have often thought how Washington and Lincoln learned, in the

constantly recurring emergencies of farm life, how to face new problems and to solve them. I hope to live long enough into the next century to hear it cry shame on any instructor who tries to teach children to think by divorcing them from their most pronounced characteristic, movement. No thought without movement, will some day become the watchword of the teacher of children. It is the head, the thinking power, that guides these new combinations of movement. Close attention is requisite for thinking. The child finds little trouble in centering his attention on anything that moves. He is naturally more interested in his own movements, in those of other people, of animals, and of things, than in anything else. Unnatural attempts to think can only make a child's life wretched. Education today needs to turn its attention toward the motor-thought training of children, until they have reached sufficient age so that they can more naturally attend to subjective ideas. Introspection should not be a marked feature of childish life, because its mind contains but little, and it should be busy in learning the objective world.

Fortunately, the majority of children have much valuable motor training in their games. The English have long prided themselves on this feature of their education. A recent English psychologist says: "What our national games have done for the English race it is difficult to overestimate. . . . . The playing fields are the finest schools of organized co-operation in the world."

I know of no better way to eliminate thoughtlessness, or the thoughtless person, than to set him to moving. Scratches, bruises, and falls are powerful cultivators of thought. Movement means pain or death to the thoughtless. What stronger incentive to think can be given to children than to make them move? Since their most pronounced characteristic is movement, it is time that teachers utilized it more widely in training children to think. Verily, in spite of child-study, the adult still loves to educate them in the most unnatural way. Let it not be forgotten that humanity, in its wonderful march from barbarism to civilization, was taught chiefly in the school of movement.

Observation of children has certainly contributed to the science of education something in regard to the teaching of morality. Such observation has shown that those who try to teach morality by mere word of mouth waste their efforts. Morality deals only with certain types of action. Where there is no action, there can be no morality. If the child cannot interpret moral lectures in terms of its own actions, the lectures might as well be given in a foreign tongue. The old type of Sunday-school book preached a good system of ethics, but it was without much result in moral action. If I might briefly define four-fifths of all the morality now taught in schools, I should say that this school morality consisted in the eternal negation of action. Being good consists chiefly

in not being bad. By parity of reasoning we may define boiling water as water which is not cold. How many teachers show children how to be moral on the active side and lead the way?

If a part of those well-meaning teachers who show the industry of the magpie in making collections of heterogeneous facts about children would study the history of the race in its development from barbarism to civilization, the science of education would be the gainer. Before we can intelligently train the morals of children, we must understand how the conscience of primitive peoples was developed and educated. They were like children, thinking that wrong was right at one time. What class of experiences changed these views? We shall find that movement and its consequences have ever preached to savage and to child a more powerful ethical sermon than mere words. I hope at some future meeting of this body to have the luxury of listening to a paper entitled, "Factors in the Development of the Moral Sense of Primitive People and Their Application in the Ethical Training of the Child."

Many teachers have already learned that to heap together a mass of soulless statistics about children is not to study the child. However useful a reasonable number of observations may be, the one who rests content with them will always find a Rubicon between himself and the soul of the child. Statistics afford a vantage ground for studying children, but there is a great gulf fixed between the statistics of the subject and that loving knowledge of child nature which can be born of sympathy alone. Without this sympathetic atmosphere, the science of education will beat its wings helplessly in a vacuum.

DISCUSSION

PROFESSOR CHARLES O. HOYT, director of Training School, Michigan State Norma School, Ypsilanti, Mich.—Two distinct studies, involving two quite different methods, will, each in its own way, lead to results that, appearing in opposition to each other, may eventually join in one ultimate end in education. By the study of children in aggregates, in masses, or in groups, much has been, and is being, contributed to psychology. The psychologist has reaped this great benefit, but for the common school teacher as yet there has been but little participation in the valuable gains to this science. It may be inferred, however, that in time these and many other, and perhaps more valuable, discoveries will contribute materially to the science of education. Thru a study of the single child in his individuality, which is inherited, and in his personality, which is acquired, it is thoug[illegible] by some that the greatest immediate additions may be anticipated.

When the common-school teacher understands each individual child better there will be an adaptation of materially modified principles in the development nature, instead of an attempt being made to adapt the being to a few cast-iron r cal deductions — relics of the philosophic lore of a former age. If the whole

machinery exists for the child, and he stands at the very center of such a system, and if he, thru the acquirement of new experiences by means of old ones, does for himself that which may contribute toward effecting a change in himself, his fellows, and his surroundings, in proportion as teacher or parent grows into an appreciation of his powers, then everything in educational theory must be tested by reference to the living child in the schoolroom by the ones in daily contact with him, and not by the scientist in his laboratory.

Admitting that much good has come to children as a result of our study of them, it is equally true that teachers as well have been greatly benefited and strengthened for this work, and thus have become strong agencies in effecting changes in the means employed in education.

Given a teacher equipped academically and professionally, imbue her with a spirit of investigation and a desire to observe children's ways, and she becomes a controlling factor — a power in any school system; she may disregard some educational principles which she may have learned, but never understood, but thru this close, personal touch with child life a spirit has manifested itself and tempers the atmosphere of the entire school. It reaches each child because she understands him. She may dare to disregard the logical arrangement of the manufactured course of study, but she teaches well nevertheless. It is altogether possible that in the selection and presentation of the subject-matter she displayed originality and departed from the philosophical, and even the accepted psychological, law, and yet supplied their needs as she found them, in spite of her nonconformity to fixed principles. She taught her boys and girls well withal. But we contend, to permit such freedom and originality would produce anarchy and wreck the system. Given thousands of such teachers working with the same spirit, being untrammeled and free, and a new system will come — a system that will bring with it new principles and new laws, formulated, in the one instance, by the expert from the standpoint of science, but tested and modified by the laborer from the standpoint of the child. We must not minimize the great work of our leaders in their studies of children in the aggregate, but all workers, from the kindergarten to the university, should lend all needed assistance in their study — extensive in its character. On the other hand, to the common-school teacher, who is with the children day by day, month by month, and year by year, there is need of encouragement in a line of study that is intensive in its character.

She cannot do this alone. There is need of help, direction, and inspiration; and while little that possesses large scientific value may be deduced from her investigations, it may be a means of preparation for the uniting of principles and methods later on. This will, in the end, result in a change, the exact character of which cannot, in the light of investigations already made, be determined.

Two forces appear that may serve as agencies in assisting and encouraging the grade teacher to study the child — the individual, the exceptional — as she sees him from day to day.

We find the teacher already in service and the teacher who is being trained for the work. With the first the supervisor in city, village, or district may do much to inaugurate such a line of study and observation. On the other hand, the work of training students in the practice schools of normals may carry with it that which will fit the teacher to do this.

Neither superintendent nor teacher can find time for the collection of data that possess not a single feature of immediate practical value; and if they did, the chances are that either would manifest but little interest in such investigations. But has it not been shown that it is possible to do a work of such a character that there is a study, first, of individual children in each room, and so on, until all were fairly well understood? Their organisms and conditions and needs being somewhat thoroly mastered, few facts that

would be of value to the specialist were recorded; no tabulation of results attempted; perhaps nothing new discovered; but, best of all, for teacher and pupil alike, a new spirit has been given the entire school. The first steps have been made in the preparation for the reception and assimilation of new principles, or new methods, as the outgrowth of new laws.

School and home will not be so widely separated in the future as they have been in the past. Thru a union of the interests of teacher and parent, by means of frequent conferences, still another force has been at work, a force by no means of inconsiderable importance.

A large part of the work in our normal schools is professional in its character. Some few of the students to be found there have had a limited teaching experience; but of all students but a very small number have any knowledge of systematic child life, and fewer are in sympathy with the same or appreciate the needs of the child, because they do not know them. Too often their psychology has been a mass of philosophical abstractions drawn from books rather than from the study of the living, active child. Educational principles, it is true, have been learned, method has been accepted, all has been reasoned out, theorized upon, or taken for granted. In the practice school they come in contact with a living organism, concerning which all that has gone before seems of little value in their estimation. The ideal comes in contact with the real, and may be utilized for a definite and distinctive purpose. It may not be found impossible, at this stage of the course, to incorporate in the work of the training school such an intelligent observation and study of children that in all of their future teaching these student teachers may carry into the schools a spirit of liberal investigation and fruitful observation of children that will supplement the work of the superintendent. Teachers will be led to succeed where otherwise they might have failed. The schools will be made better, and certainly the children benefited.

In this way, and along these lines, one may justly inquire: Is it not possible for child-study to contribute to the science of education, and, by so doing, assist in the solution of some of the great questions that are perplexing educators everywhere?

THE LIGHTING AND SEATING OF SCHOOLROOMS

BY DR. W. A. MOWRY, HYDE PARK, MASS.

Local school superintendents have great responsibilities upon their shoulders. Perhaps they are oftener guilty of sins of omission than of commission. Possibly no officers in the world, outside of military lines, ought to be more independent or freer to carry out the ideas which their own experience, study, and judgment dictate than they. Yet, is it not true that they are very generally "cribbed, cabined," and controlled by officials who have little knowledge of what ought to be done, and yet have full power to do, or not to do, as they please? In many cases even public opinion has but little influence, while full authority is centered in certain men who are privileged to exercise it for a brief space, and who are quite apt to make the most of their opportunities.

Few subjects connected with the management of the schools are of greater importance than the hygiene of the schoolroom. The scope of this paper is limited to the two topics of lighting and seating. I desire to call your attention briefly to the matter of lighting schoolrooms, and beg to be permitted to speak a little more at length upon the other topic — that of desks and chairs suitable for the carrying on of school work to the best advantage.

LIGHTING

Very little attention has generally been given in this country to the proper lighting of schoolrooms. Too often the children sit directly in the glaring sunlight, sometimes facing it, as it pours thru the windows, destitute of shutters, blinds, or curtains. Still oftener the teacher must sit at his desk, facing windows located behind the pupils. The windows of a schoolhouse are generally placed here and there by the architect or the carpenter, according to his notion of what will look well from the outside. It is to be feared that in many communities very little attention is given to the proper amount of light which is required for the schoolroom, or how it should be arranged to the best advantage.

Cultivated society has its drawbacks. Certain evils are incident to the conditions of modern civilization. Germany found long ago that the eyesight of the children was suffering from the conditions incident to schoolroom study. That country was compelled to take measures to bring about a more intelligent attention to the lighting of her schoolhouses. The conditions in America are more favorable than in Germany. We have less dull, dark, and cloudy weather, and hence a greater quantity of light. The eyesight of our children ought to be good, and will be if proper attention is given to this subject. It is, however, the general complaint that long-continued study in school or college injures the eyesight. This need not be and ought not to be; moreover, it will not be if superintendents and others directly concerned will do their duty.

I have in mind a private school for boys between the ages of ten and twenty years. A new schoolhouse was built, with due regard to the proper conditions of lighting. There were in the school from 200 to 250 boys. An eminent oculist made a record of the condition of the eyes of these pupils. Two years later he again examined the eyes of all then remaining who were in the school at the former examination. Two years after that he made a third examination. Here was an intervening period of four years, and this record showed that, with the exception of a few cases of astigmatism, the eyes of these boys were universally *in better condition* than at the beginning of this period.

Still further he found that where astigmatism existed — which gen-lly increases at the age of these youth — its increase had been less than

is usually found to be the case. These experiments showed clearly that, with a large number of youth under proper hygienic conditions, the eyesight may be improved, altho the attention of the pupils is steadily and persistently confined to text-books. In this case, perhaps, one-half of the boys were pursuing the study of Latin, and many of them also Greek. Now, what were the conditions which produced this favorable result?

1. The light was admitted only from one side of the schoolroom, and that at the left side of the pupils as they were seated.

2. The quantity of the window glass was 10 per cent. of the surface of the floor. Many claim that the best conditions require a larger amount of glass than this. From wide experience and observation, I am quite inclined to think that pupils sometimes suffer from too much light, as well as in other cases from too little. In my opinion 10 per cent. of the surface of the floor is about the right amount for window space.

3. These windows were long and high. The schoolroom was thirteen feet studded. The windows were nine feet in length and the window-sills three feet from the floor. This arrangement of windows made the light far more effective. The schoolroom was forty feet in length—measuring the wall into which the windows were inserted—and was thirty feet in width, so that no scholar sat farther than twenty-seven feet from the window.

4. There was an entire absence of swiveled blinds. Such blinds are very detrimental to the eyesight. They cannot be made so as to shut out all of the sunlight, and the light, being admitted thru these cracks, crevices, interstices, between the slats, is painful and exceedingly injurious to the eyes. The windows had semi-opaque curtains of a drab or straw color, which, when drawn, shut out entirely the direct glare of the sun, but admitted sufficient light for purposes of study.

5. To these conditions of light were added proper heating, efficient ventilation, and an abundance of pure air. Twenty-five square feet of flooring was allowed for each school seat. That is, the floor contained 1,200 square feet, and the room had forty-eight seats. These conditions of a healthy atmosphere so directly affect the nerves and the mental status of the pupils as to produce no little influence upon the action of the delicate optic nerve.

Mind and body react upon each other. Healthy, vigorous, successful study, mental acquirement and mental development, are exceedingly difficult in an overheated atmosphere of impure, vitiated air, and, may I add, with a nervous, irritable teacher presiding over the room. Moreover, this nervous, irritable condition of the teacher is very often directly induced by the foul atmosphere of the room, which, by a normal and healthful condition, might perhaps be entirely avoided.

Our country is full of old schoolhouses, badly constructed, on wrong

principles, with very little attention to proper rules for lighting and heating. In such cases not much improvement can be made. But, I submit to you, superintendents, that it is your sacred duty, from which you cannot exempt yourselves, when new schoolhouses within your jurisdiction are to be erected, to insist with all your power and influence that proper attention be paid, by the architect and the building committee, to this important matter of furnishing to the pupils — the youth who in the next generation are to have charge of all the affairs of this country — a proper amount of God's sunlight, which he has so generously distributed everywhere with such profusion; so that these innocent children be not deprived of this essential element of health and happiness in life, and their ability be not dwarfed to do good service to the communities in which their lives are to be passed.

SCHOOL SEATS AND DESKS

We come now to take up the second division of our subject: What is the proper method of seating the pupils in school, and what is the proper desk which they shall use in their work? I feel sure that few persons who have carefully examined this subject will object to my statement that this is not only one of the most important, but also one of the most difficult, questions that we can discuss in connection with our whole school system.

In some respects and in some directions great improvements have been made within fifty years past in the style and construction of school desks and seats. But, if I am not mistaken, the problem has not yet been solved. We have now cherry desks, where we formerly had them made of pine. We have now chairs with a hard wooden seat and a back, where we used to have an oak plank for a seat without a back. But, altho our modern desks and chairs look much better than did those in use half a century ago, and while they may be *somewhat* more comfortable, yet the main problem remains as unsolved today as it did in the boyhood of the oldest gentleman present. We have not yet invented a proper schoolroom chair, and nobody yet knows how to make a school desk.

In the old times a shoemaker sat upon a bench, hard at work with his hands and arms from morning till night. His seat was a hole in a pine board, covered with soft, flexible leather. That is hardly an ideal seat, but I have never seen a schoolroom chair half as comfortable as the seat of a shoemaker's bench. I hope some genius in this great pedagogical profession, some skilled mechanic, some gifted inventor, some Sir Humphrey Davy, or Eli Whitney, or Professor Morse, or some wizard like Edison, will yet invent a decent, comfortable, hygienic school chair. When it is done we will all take off our hats to the inventor. We will petition the government at Washington to grant him a patent, and if he

should secure a moderate royalty from the manufacturers and live after his invention one-half the allotted age of man, he will die a multi-millionaire. I have, however, very little faith that any of us will live long enough to see the invention of a school chair which shall fulfill all the necessities of the case. I, therefore, propose to dismiss this part of the subject, not in disgust, but really in despair, thereby running the risk of acquiring the reputation of being a pessimist. I am, however, very sure that nobody can call me a pessimist on any other subject except this matter of a model school chair.

Let us, then, approach the subject of the school desk and see what difficulties we shall find there. First of all, the desk should not consist of a horizontal plane, but should have a proper slant. Well, so did the desk in the schoolhouse where I first attended school, and that was before most of you were born. In the next place, the desk should have a lid fastened by hinges, and below it a good-sized box in which to keep the books and papers of the pupil. But, again, the desk in the schoolhouse where I went when I was five years of age was constructed after this fashion.

But we have made within a few years past one grand improvement. We now have adjustable desks and chairs, and, without fear of contradiction, I maintain that it is the duty of every superintendent in the wide land, when new desks and seats are purchased, to insist on having adjustable desks and seats, and no others.

This duty surely you ought to attend to. The superintendent cannot innocently shirk his responsibility in this respect. I repeat, he should insist on adjustable desks and seats whenever new furniture is to be purchased for any schoolroom. This, however, goes but a short distance compared with what is absolutely needed and is of the greatest importance.

This adjustability is yet only in one direction. It is a beginning, but I fear the end is far distant. The adjustable desk and seat today has reference principally to the proper height from the floor. You remember the story of some members of Lincoln's cabinet. They had discussed at considerable length, but without coming to a conclusion, the important question how long a man's legs ought to be. They finally referred the matter to Mr. Lincoln as one competent to judge. It is said that the President expressed gratification that they had brought the question to him. He said that he had given a good deal of attention to it, being somewhat interested personally. They asked him if he had come to a decision about it, and he answered, "Yes," he had. They then inquired how long a man's legs should be. Lincoln said: "A man's legs should be just long enough to reach the ground." Now, we agree with Mr. Lincoln upon that point. A child's chair should be just high enough for his feet to rest easily on the floor, and the desk should be of such a height

as to allow the forearm to rest upon it in a comfortable position for writing. Here is the advantage of the adjustable desk. But, good friends, adjustability should go much farther than that. The school desk is for a double purpose, and the one purpose seems to be inconsistent with the other. The school desk should be adapted *to study* as well as *to writing*.

We have today adjustable desks that are proper and convenient for the exercise of writing. The child may sit in a normal position, with his paper before him upon the desk; his right hand may hold the pen, and he may write in his copy-book, either vertically or on the slant, with comfort, ease, naturalness. So far we have succeeded. The trouble, however, comes when we ask that boy to take up his book and study his lesson, sitting at the same desk. Now a new problem confronts us. The desk should be so constructed that the book shall be held by it at a proper height, the right slant, and the correct distance from the eye. The seat must compel the child to sit upright, in a normal and healthful position. And then, if the desk can fulfill the conditions just named, holding the book for the child at a proper distance from the eye, and not allowing him to bring it too near the eye or to carry it too far off, as is so often the case when the child holds it in his hand; if, also, this desk holds the book with its page perpendicular to the line of vision—then you will have a desk that can properly be used for study in the schoolroom. Until this is achieved, our school furniture is at fault, and we are unable to solve this important problem.

As I design this paper to be practical and not theoretical, I have ventured to call your attention only to some of the more apparent difficulties connected with school seating, as I have encountered them in my own experience. Following this idea, I will ask your attention to one more point of difficulty, and it is gratifying to me to say that in this you can attain entire success.

I refer to the proper distance between the back of the seat and the desk. I greatly fear that, as simple as this problem is, many of us have not yet solved it. If you will merely turn your attention to the case, there is no difficulty in easily securing the needed improvement. Everywhere I go, thruout the counry, north and south, from Maine to Puget Sound or the Golden Gate, the little pocket rule, twelve inches in length, which I always carry with me is whipped out, and the distance between the back of the chair and the front edge of the desk is measured. I am frank to say to you that it is an exception when I find this distance to be correct.

The problem is so simple that I need only to state it to you and give what I have found from my own experience to be the proper distance. For children in the lowest primary the distance between the back of the chair and the edge of the desk should be not over *nine inches*. Yet I

often find it twelve, fourteen, and sixteen inches. The consequence is, the child either sits on the front edge of his seat in order to use the desk before him, or he sits back against the back of his chair in an unnatural, constrained position, calculated to produce spinal curvature. Between the primary school and the higher grades of the grammar school this distance should vary only from nine inches to twelve. Twelve inches' space is enough for grammar-school pupils, and it is seldom in the high-school grades that any stout pupil will need more than thirteen inches' space between the chair and the desk. Quite lately a chair has been invented which has a horizontal adjustment to remedy this defect. It, therefore, only needs knowledge and attention to make this distance what it ought to be.

I most earnestly ask that, as superintendents, whose duty it is to attend to these important affairs, you make whatever changes you find needful in the schoolrooms under your care in this respect. In this brief paper I have discussed in a practical, offhand way only three points relating to schoolroom hygiene — the light, the seat, and the desk. My experience, however, tells me two things: first, that these points are of great importance, and, second, that they are almost universally neglected. I wish it were in my power to hold the superintendents of this country responsible for the introduction of the best school furniture and the proper adjustment of the same to the wants of the pupils. Could that be done, a strong impetus would be given to the cause of education, and far greater results would be accomplished than in the past.

DISCUSSION

F. LOUIS SOLDAN, superintendent of schools, St. Louis, Mo.— It is difficult to discuss, with any degree of definiteness, the clear principles laid down in the paper just read, because there is an honest difference of opinion respecting some of the leading propositions in regard to school hygiene. In presenting candidly some of the points of difference, among the many points of agreement, with the paper, I desire to have it understood that I do not claim for the views to be advanced any weight as compared with the views expressed in the paper, except what your approval or disapproval will give to the relative views. It may be that in some of the points of difference the writer of the paper is right, and the authorities to be quoted are wrong. A large number of the propositions concerning school hygiene will form debatable ground.

In regard to the lighting of schoolrooms, the great authority on the hygiene of the eyes of school children, Dr. Cohn, of Breslau, says pointedly that there can never be too much light in the schoolroom. The meaning of this phrase is evidently not that there may not be at times too much light for the children's eyes, but it must mean that it is easy, when a schoolroom has sufficient window space, to prevent the excess of light by blinds or curtains, while it is not true, *vice versa*, that, when there is insufficient window

area, light can be supplied in other ways. A superabundance of window space will do no harm, since it is easy to shut out some of the light; a lack of window space is absolutely objectionable.

Many things depend on sufficient lighting, as, for instance, the preservation of the eyes, the correct posture of the body, which is impossible if the child has to turn toward or away from the source of light in order to see the book or letters. But there are other, less evident, but equally important, points to be remembered in connection with the lighting of schoolrooms. A sufficient amount of light arrests the development of bacteriæ; it facilitates cleaning, and renders it easy to detect derelictions of janitors.

No absolute statement can be made in regard to the extent of window surface in proportion to floor space, since varying conditions, such as the width of the street, the height of the houses across the way, the direction of the windows, modify every rule that can be laid down. The Commission de l'Hygiène scolaire (1882) demanded that the windows should be so placed that from the last seat in the room the child can still see perhaps thirty centimeters of the sky.

The most radical demand in regard to the relation between window space and floor space seems to be that the former should be at least one-fourth of the latter, and that, moreover, the pupils most remote from the window should be able to see the sky. The most reliable tests, however, are the photometric tests, taken in each room, and for which apparatus is now being introduced by government inspectors of European schools. While one-fourth of the floor space devoted to window space represents an ideal condition, which I believe can be but rarely complied with, one-fifth or one-sixth should be the minimum window space. I cannot recall any authority which approves of a window area as small as one-tenth of the entire floor space. New inventions, however, are being made that may possibly change considerably the figures given before. I refer to the so-called prismatic glass that has been placed on the market of late, and which is said to throw light from the windows into the room a much greater distance than the ordinary glass.

Location of windows.—The windows should be located at the left of the children. If they are located in the front of the room, they blind the children; if in the back of the room, they blind the teacher. Moreover, if in the back of the room, they cast a shadow on the books in front of the children. On the other hand, windows at the back, located high above the floor, facilitate blackboard inspection in the front of the room. Windows at the right would throw the shadow of the hand on the letters which the child is writing. To have windows both at the left and at the right would be serviceable, for the purposes of ventilation, and for the cleaning of the buildings, but the double shadows cast by objects are not good for the eye, and, therefore, the light from one side at least must ordinarily be closed out by blinds.

If there are windows on one side only, the wall space between the windows should be as narrow as good construction can make it. In the Dutch schools one and one-half feet between the windows is the maximum. The best construction would be iron or steel construction, so that the windows have above them an iron girder which, supported by the iron posts between the windows, will in turn support the masonry above. In this way the whole side of the room can be filled with windows. The top of the windows should be as high as it can possibly be placed. The light from the top is the most useful for the children sitting far away, and the arched top of windows is, therefore, objectionable. This construction diminishes the amount of the most important portion of the light. For similar reasons, the placing of flowers on the window sill is open to considerable objection. It may diminish the amount of light considerably.

The window panes should be of large size, to reduce the woodwork which obstructs the light to the smallest possible quantity. The beveling of the outside walls where they bound the window frame will help to admit additional light.

The glass itself absorbs much of the light, and transmits but a fraction. A double pane of plate glass will absorb 21 per cent. of the light, matt glass 27 per cent., that which is called cathedral glass 12⅔ per cent. It is clear, from the fact that glass does not allow all the light to penetrate it, that the best and clearest glass should be used for window purposes. It shows, moreover, the necessity of the regular and frequent cleaning of windows.

Window blinds should not be of dark material, because even white blinds absorb 87 per cent. of the light.

VENTILATION OF SCHOOLROOMS

BY ASSISTANT SUPERINTENDENT A. P. MARBLE, NEW YORK CITY

Hon. Yung Wing, a Chinese diplomat long resident in the United States, was educated in this country and graduated at Yale. He once said to his old teacher, Mr. Hammond, of Monson Academy, Mass., that it would have saved his countrymen untold millions of money if they had understood the principle of the draft in chimneys; they had always built fires on open hearths and braziers. In health and comfort, if not in money, an equal amount would be saved in this country if everybody understood the simple principles of ventilation.

In ventilating a schoolroom, the problem is to supply for every pupil about thirty cubic feet of pure air per minute, at about 70 degrees Fahrenheit in winter, without producing drafts. And the conditions of the problem are various: between the north and the south; in summer and in winter; on the windy prairie and in the shelter of the hills; in the city and in the rural district. The principle is the same in each case; the application of that principle must be modified to suit the various conditions.

In the schoolrooms of this country every known variety of ventilating apparatus may be found, from nothing except the doors and windows, to systems so elaborate and complex that the air itself seems to become confused among the labyrinthine flues, and ducts, and passages. It is not to be expected that every teacher will understand all these; but every teacher should learn at once the provision made for ventilating the schoolroom that he occupies. On inquiring the purpose of a particular register or flue in the walls of the schoolroom, we frequently hear the teacher say that it is designed for either the ingress or the egress of either fresh air or foul, warm air or cold—he doesn't know which; and this answer represents the acquaintance of a majority of the teachers with the means of ventilation in their own schoolrooms. They know as little about it as the Chinese knew about chimneys.

In recognition of this prevailing ignorance, automatic regulators of

heat and ventilation have been provided in some schoolrooms at great expense; but the thermostat, tho useful, can never take the place of an intelligent teacher. As the first step, therefore, in improving the ventilation of schoolrooms from one end of the country to the other, my first proposition is this: Three pieces of ribbon half an inch wide and a quarter of a yard long (for patriotic reasons, red, white, and blue) should be tacked above every hole in the wall, above every window and every transom, thru which the air may pass either outward or inward. By this simple device the teacher may see at a glance what is going on. He may not know what the various registers, flues, and ducts are meant to accomplish, but he *can* know what they actually do; and in the absence of the ribbons he may paste up narrow strips of tissue paper—just as good as long as they last. This simple expedient is far more valuable than it may at first appear. It constantly calls the attention of both teacher and pupils to the motion of the air; it is a protection from drafts; above all, it daily invites to a study of the schoolroom air.

My second proposition is that the heating and ventilation of schoolrooms should be a required study in every normal school and a subject of examination for teachers. As said above, teachers generally know but very little about the means employed to ventilate their rooms, how it is intended to operate, or whether it works at all. And why should they know when they have never been taught, nor had any particular chance to learn?

The movements of the atmosphere are as interesting as the study of the motions of Saturn or the moon, and far more practically useful. As between astronomy and aërology in a normal school, let us have aërology. Notice the particles of dust, or a wreath of smoke, seen in the sunbeam as it enters a partially darkened room. At the flight of a fly the particles dance as if alive; at a breath the wreaths circle and curl in fanciful shapes like hieroglyphics. Contemplate now the blizzard that uproots trees and sweeps to destruction houses, villages, and even the masonry of great cities. Both the smoke wreath wafted gently upward and the devastating tornado exhibit the effect of heat upon the air; and this elastic, expansive, and sensitive air is the subtle medium to be directed and controlled in ventilation. Who says, now, that aërology, ventilation, is not an essential study for normal schools?

The methods employed in the ventilation of schoolrooms are of two kinds: the natural method, and the artificial or mechanical method. The first of these is the more simple, and generally it is less expensive; the last is the more costly at first, but more effective, especially in large buildings.

The so-called natural ventilation consists of a heated flue, or series of flues, in which a draft is produced. It depends upon gravity alone; but

it is sometimes supplemented by the force of the wind. It is not natural in the absolute sense, since it depends upon the construction of the schoolhouse.

The heated air in the flue expands; it occupies more space and is, therefore, lighter than the colder air; this colder air, by its greater weight, falls and forces upward the heated air, just as a balloon is raised by the downward pressure of the surrounding air, and just as a cork is raised by the downward pressure of the water on which it floats. The floating cork is lighter than an equal volume of water, the balloon is lighter than an equal volume of air; and, in like manner, the heated air is lighter than an equal volume of cold air, and so the lighter air is raised or pushed upward by the heavier. The heated air does not pull upward thru the flue; it is itself pushed up. Tho in a sense the draft is caused by heat, in another and a broader sense the draft is caused by gravity. With an open fire, if the flue is damp and cold when the fire is first lighted, the chimney does not draw because the warm air becomes chilled before it reaches the top of the chimney, so that the downward pressure in the flue is as great as the upward; on the other hand, if the room is closely built, so that no cold air can enter thru the crevices, then the chimney will not draw because the lighter air cannot be lifted up the chimney. A ventilating flue, then, is constructed upon the same principle as an ordinary chimney.

The jacket-stove is simply an ordinary cylindrical stove surrounded with a sheet-iron cover placed several inches away, reaching to the floor and open at the top. Below the stove a flue extends to the outer air. The stove heats the air within the jacket; the warm air rises into the room, and the cold air enters from the outside to become heated, and rise in its turn. Of course, being lighter, the warm air passes to the top of the room. If now the room is tightly closed so that no air can escape, the warm air will soon cease to come inward thru the jacket, because the room is full. By lowering a window at the top, the warm air from the jacket will pass outward and neither warm nor ventilate the room. On the other hand, if the chimney flue or any heated flue be opened near the floor, then the air is withdrawn from the bottom of the room where it is coldest; and this makes room for the heated air to enter again thru the jacket. In effect, the jacket is a chimney, so to speak, to bring warm air into the room, and the chimney or ventilating flue withdraws the air just as it does with an open fire. By these appliances the air of the room is constantly changing—the warm air from the jacket rising to the top of the room, and then gradually settling and warming the whole room as the air of the room is exhausted from the floor thru the ventilating or exhaust flue. The jacket is the supply ventilating flue. It has been demonstrated that in rooms of ordinate or moderate size the warm air

circulates best to all parts of the room, producing a uniform temperature, if the opening or register of the exhaust flue is directly below the register, or top of the jacket, where the warm air enters the room. It should be noted, however, that the room must be tightly built if this uniform temperature is to be secured; and that the warm air which strikes the cold glass of the windows in cold weather parts with its heat at once and falls to the floor. The falling of this chilled air upon the pupils near the window is as harmful as a cold draft thru the windows; and it is often thought to be such a draft. Chilling of the air by the windows interrupts the uniformity of temperature in the room. The remedy is double windows; in cold weather they pay for themselves in a single winter, both in economy of fuel and, especially, in great comfort.

The jacket-stove illustrates every other method of natural ventilation by means of heated flues. The hot-air furnace is merely a large jacket-stove placed in the basement. It has a cold-air supply on the same principle; and the warm air rises from the furnace to one or several rooms thru metallic ducts. These ducts frequently open into the room thru registers in the floor. The registers should never be placed in the floor, because they inevitably collect dust. They should be placed in the wall seven or eight feet above the floor, because the warm air passes to the top of the room in any case, and the elongated flues produce a better draft.

Again, steam coils or radiators, inclosed each in a box thru which the outer air passes to be warmed, are merely another form of jacket-stove; and they operate upon the same principle, so far as ventilation is concerned. If the steam radiators are collected in one large room in the basement, from which ducts convey the warm air to to the several school-rooms, then this large warming room is, in principle, only a jacket-stove or steam furnace. In every one of these—the jacket-stove, the furnace in the basement, the steam radiators distributed, and the steam radiators collected in a single room in the basement—the warm air is carried thru flues to the top of the room by gravity, that is, by the pressure of the heavier cold air, which makes the warm air to rise.

And in each of these cases the warm air will not enter the room unless a corresponding volume of air is constantly withdrawn. As already stated, if the windows are lowered at the top, or if a ventilating flue opens from the top of the room, the warm air simply passes outward without either warming or ventilating the room. Hence it is apparent that the air must be withdrawn, or exhausted, thru flues opening near the floor; and these flues must be heated in some way, to produce an upward draft.

The wind has an effect upon every one of these modifications of the jacket-stove. If it blows directly upon the radiators, the air will enter

the room before it is warmed, whether the radiator be the stove, the furnace, or the steam coil. Moreover, the rooms on the windward side of a loosely constructed house will feel the pressure of the wind, and the warm air will not rise from the radiators thru the flues. The effect of the wind must, therefore, be provided against and discounted in advance.

There are also various devices in use for utilizing the force of the wind in producing drafts in chimneys and ventilating flues, and so forth. The trouble with them all is that they are effective only on windy days, when they are least needed.

The fault of this natural method is that it depends upon a wide difference of temperature between the outer air and that of the schoolroom. It does not operate effectively in still, mild weather, and in such weather the chief dependence must be placed upon open windows; but its simplicity commends it for small buildings, and in places where motive power is not easily accessible.

Artificial or mechanical ventilation is like the natural method just described, in respect to the radiating surface and the conducting pipes or flues, both for the ingress of fresh, warm air and for the exit of vitiated air. It differs from the natural method in that it propels the air either inward or outward, or in both directions, by means of a fan, or blower, or a form of air-pump, driven by steam or other power. It, therefore, acts uniformly, and independently of wind and weather.

There are various forms of fans driven by steam or electric power; but it is unnecessary to describe them here. They are sometimes used to force the air over the radiators and into the schoolroom; this is called the *plenum* system. Sometimes the fan is used to withdraw the air from the schoolroom thru the ventilating flues or ducts; this is the *exhaust* system.

The exhaust fan may withdraw from the room thirty cubic feet per pupil each minute. The vacuum so created should be supplied thru the warm-air or radiating flue; but practically the air comes in partly thru the crevices in the doors and windows. The exhaust system is a failure when used alone.

The plenum system forces the requisite quantity of fresh, warm air into the room every minnte. If the exhaust flues are properly heated, a large part of the vitiated air will pass out thru these flues; but a certain proportion of air will be forced from the room thru other orifices, with no serious consequences, and yet with some interruption of the best ventilation. The plenum system is vastly superior to the exhaust system, when each is used alone; but the best results can be attained by a combination of the two.

When thirty cubic feet of air per pupil per minute, and at the proper temperature, are forced into a schoolroom, and an equal volume of

air is withdrawn by means of fans, it would seem that the ventilation must be perfect; but there are difficulties still. In the first place, a very delicate adjustment of flues is necessary, if one central fan is to force the warm air uniformly to twenty or more rooms variously located and at different distances; and an equal nicety of adjustment is necessary for the exhaust fan and its flues and ducts. If this adjustment is successful: in the second place, we meet the difficulty of drafts in the schoolroom. In no case should the air move at a greater velocity than two hundred feet per minute. Even at this rate, currents may be felt in some part of the room, unless the incoming air is dispersed at the ceiling, and the outgoing air is withdrawn thru registers a yard or two distant from the pupils. If all drafts have been avoided: in the third place, it remains to be determined whether the air is changed every fifteen minutes in every part of the room. It is not certain that this result has ever actually been produced; but the combined system of forced ventilation, if properly applied, will accomplish it, if it ever can be accomplished.

Thus far we have considered this subject mainly respecting a cold climate in winter. In warm climates the combined fan ventilation is specially desirable. Electric power is so common that all cities and most villages can make use of it in schoolhouses. With artificial refrigeration, which requires little beyond a certain amount of steam or other power, the plenum system might be used to cool the schoolroom in summer as well as to warm it in winter.

But at present no schoolroom ventilation known to me is perfect. Most of it is sadly deficient, and much of it will continue so for a long time. We must improve it as fast as possible, and in the meantime we must try to develop the "adjustable boy;" that is, by recesses, by physical exercises, and by hygienic living, the boy must be made physically so strong that he can breathe the poison of impure air and sit in drafts a part of every day, and grow fat!

I wind up with the following proposition for my brethren to chew and digest:

1. Most teachers know but little about ventilation, and they are not alone in this.

2. Red, white, and blue ribbons for ventilating vanes should hang and float above every schoolroom air-hole.

3. Aërology should be a study in the course of every normal school.

4. Nautral ventilation is defective; but it must be used in a majority of schools, and it should be the best of its kind.

5. The exhaust system of fan ventilation should never be used alone.

6. The combined system of mechanical ventilation is the best now known.

7. As to a few details:

(1) In cold climates all schoolroom windows should be double.

(2) The ingress of fresh air should be at least eight feet from the floor; and, so far as possible, the current should be thrown against the ceiling and distributed.

(3) The exhaust should always be near the floor, if possible only six inches above.

(4) All registers should be upright — never in the floor.

(5) A current of air thru a register at a velocity of one hundred or two hundred feet a minute will feel cold to the hand, tho at a temperature of 90 degrees Fahrenheit. Hence —

(6) No child should sit within a yard of a ventilating register.

DISCUSSION

STATE SUPERINTENDENT S. M. INGLIS, Springfield, Ill.— Could I rehearse to you what has come under my personal observation, as superintendent of public instruction, while traveling thru the state of Illinois (and this would possibly be but a sample of what is seen in almost every state in the union), it would lead us to more fully appreciate the truth that this is, indeed, a serious question, and would give us a more decided conviction of our duties which lie in this direction. But, like other duties often repeated, we grow careless and viciously neglectful.

We well know some of the conditions necessary to secure proper sanitary conditions in the location of the school building: (1) elevation in position; (2) proper construction; (3) position in relation to other things; (4) general environments.

All these things are recognized in the expression of our opinions, but do we follow out these suggestions when we project our final actions? Are we not tempted too often to cater to the wishes of neighbor Jones, who insists that the site is too valuable to be given for a mere school building — it cuts into a valuable piece of corn land? Another selection is made, and a corner hazel-brush patch is set off; true, it is down by the side of a stream that runs part of the year; while the ducks and geese do not forget to bask in close proximity to the "Brush College," as the rustics are wont to style it, and, that it may have some style about it, the vigorous rooter cannot forget his wont.

The schoolrooms are often not large enough to accommodate the school children who attend in the district. No proper means of ventilation is arranged, for the quantity of air seems to have been a matter of minor or limited consideration; and very soon it becomes exceedingly impure. The process of poisoning now begins. Every hour of confinement of these children in such a room is poisoning the air, and lessening the capacity of the child to do its work, stupefying its brain power. A broken pane of glass, or a weatherboard torn from the building, is a godsend to the poor inmate.

Many teachers do not know, or forget if they ever did know, of simple contrivances or devices for ventilating their schoolrooms, and the poisoning process continues. And yet the preservation of health should be of prime importance when the erection of a schoolhouse is under contemplation. Everything else — cost, comfort, conveniences — should be subordinated to this. Unless the children can be educated in a way compatible

with their health, it were better far to tear down our schoolhouses at once and abolish our whole school system.

A schoolroom twenty by thirty feet in size, ten feet high, would contain 6,000 cubic feet of air. Forty pupils would consume this, and render it unfit for sustaining the bodily functions, in just thirty minutes. Yet a larger number of pupils is often confined in a smaller room without the possibility of any change of air. Disease is engendered, delicate organs of the body are impaired, virulent poison sows the insipient seeds of death. Thus, permit me to say that in every schoolhouse without proper means of ventilation there is a slow and subtle poison which enters the blood and brain of the pupils, and saps the very foundation of life. There can be no escape from its deleterious influence. Responsibility goes with duty, and there is no discharge until the duty is done, and duty is done only when perfectly done.

We need to go back to the primitive days and to begin anew. Open up our houses; throw open our windows and our doors when necessary; let in the sunlight. Let the members of every household rejoice that a new schoolhouse is talked about. Build none other than a first-class modern house. Let it be commodious, with plenty of light and heat. Do not be parsimonious. Construct it a little larger than your needs require. Do not forget to plant graceful shade trees in the generous grounds which, of course, you have provided. Spread cheer about the school children, and you add joy to every household. By proper conditions of health, we add a world of wealth not measured by silver or gold, but rather by years of a good long life. * * * * * * *

Fellow-schoolmen, we owe it to ourselves, to our fellow-men, but more especially do we owe it to our children and to our neighbors' children, to train them, not only morally and mentally, but physically; to see that they make the world morally better by having come in contact with it. Do you believe that the school is the prime factor in this future upbuilding? Do you realize that education forms the common mind; that the common school is the palladium of our safety, the polar star that guides the ship of state into the harbor of safety? Then give the children these proper and pleasant environments, and create a homelike attachment to the shoolroom — a real love for the next dearest place to the real home.

J. L. HOLLOWAY, superintendent of schools, Fort Smith, Ark.—Someone has very pertinently said that every schoolhouse should be constructed with reference (1) to its lighting, heating, and ventilation; (2) to the convenience of its arrangement, and (3) to its architectural adornment. That this order, in a majority of instances in cities, was exactly reversed ten years ago is true beyond question. Indeed, it might be said with equal truth, as it is sometimes said of certain people, that the country schoolhouse has been built without regard to God or man, and wholly in the interest of his Satanic majesty. It is conceded, with some humiliation to our national pride, that the great authorities on this subject, with few exceptions, are found beyond the Atlantic. It may be that our over-enthusiasm for big farms, big factories, big cities, and big buildings has been so engrossing that we have not felt the necessity of giving attention to matters of small detail. The outcome is that we have failed to make provision for the economic productions of farm and factory; we have been more greatly concerned in platting new additions to our cities than we have in suppressing the ward heeler and political corruptionist; we have been content to multiply schoolhouses for the universal education of the masses, giving small heed to the necessary conditions of physical comfort and mental stimulus of the boys and girls who occupy them. The death rate among children from five to fifteen — the healthiest decade of life — in all our large cities is greater than that in European cities. Whether the neglected sanitary condition of our schoolhouses has anything to do with this cannot be fully demonstrated, but the impression prevails among medical experts that it does.

Before a line is drawn, a blue-print made, or a brick laid, it is necessary to know (1) *the amount of air vitiated by an individual in a given unit of time.* By carefully repeated experiments, this has been ascertained to vary with age — a child requiring 2,000 cubic feet and an adult 3,500 cubic feet per hour. The "impurity limit" is placed by English experts at six parts of carbon dioxide to every 10,000 parts of air and by the Germans somewhat higher. Since fresh air contains, according to Parkes, four parts of carbon dioxide to every 10,000 parts, it is seen that exhalation needs to double this amount at most to pass the danger line. This fact established affords a basis for determining adequate room dimensions; therefore it is necessary to take into consideration (2) *the space limit which must be accorded to each child.* This likewise varies with age, the usual allowance being 200 cubic feet for a child and 300 cubic feet for an adult; or, reckoned in floor area (the ceiling being 13 to 14 feet high), each individual should have from 12 to 20 square feet. Suppose that we wish to provide a room for fifty pupils. If each is allowed 15 square feet of floor area, the room will be 25×30 feet. If the ceiling is 14 feet, each child is provided with 210 cubic feet of space. This amount of air is vitiated to the "safety limit" every six minutes. Hence, satisfactory ventilation requires that the air of the room be completely changed as often as once in every six minutes, or about ten times per hour. Such being the case, (3) *a knowledge of the laws of air currents is absolutely necessary,* for upon this will depend the length, position, number, and areas of cross sections of the inlets and outlets. It is immaterial what system of heating and ventilation is used: a full knowledge of the principles just stated are indispensable. It is due to the ignorance of these things that we have churches, schools, theaters, and hospitals containing from twenty to seventy-five, and even 100, parts of carbon dioxide to the 10,000 parts of air. Were it not for the infrequency, or short periods, of use, they would be a constant menace to the health and life of their occupants.

Heating and ventilation, tho antagonistic, cannot be considered apart, since weather conditions of all sections of the country necessitate fire during a part of the school year.

Of course, natural ventilation is the ideal system, but the foregoing facts indicate that this is out of the question for the schools during two-thirds or three-fourths of the scholastic year. The whole problem, therefore, resolves itself into two factors, viz.:

1. Provision for supplying and distributing the requisite amount of fresh air, and
2. Provision for discharging unwholesome air.

The practical question is, How may we produce a breathing schoolroom? Heat is the constant in the problem. It may be applied directly to the fresh air by means of stoves or furnaces, or the air may be warmed by steam-heated or water-heated surfaces. Since 80 per cent. of our school population is rural, I think it quite safe to say that at least 90 per cent. of the schoolrooms of this country rely upon stoves or hot-air furnaces for heat and ventilation. This estimate is based on the fact that practically all rural schools, and a very large percentage of village and town school buildings, are heated by this method. In view of the fact that heating by hot air seems to be the only feasible plan for the single room, the simplest, most economical, and best system which the inventive genius of experts can devise should be made known. Even then I have serious doubts that the grave evils now existing can be overcome, unless legislation puts the force of compulsion behind the movement to secure scientific heating and ventilation. I dare say that less than 5 per cent. of the 200,000 rural schoolhouses of the country today use anything other than window and door ventilation. One of the best plans yet suggested for the single room, in my judgment, is that described by Dr. Marble in his report to the Department of Education in 1891 under the caption "Sanitary Conditions for Schoolhouses." In this plan fresh air enters the room thru ducts which con-

verge under a jacketed stove. The air thus heated is thrown into the room about eight feet from the floor, thus avoiding direct drafts upon the pupils. After circulating, the vitiated air is drawn off thru the cloakrooms into a ventiduct warmed partly by the adjoining flue, and partly by a sheet-iron diaphragm, upon which the hot air impinges as it rises around the stove. To my mind, the most objectionable feature about this is that, in the attempt to make the foul air do service in drying the wraps, there is a strong probability that they will become impregnated with the organic impurities thrown off by pupils.

It is generally agreed that the most economical, and in many respects the most satisfactory, method for larger buildings is by the direct-indirect system of steam heating. In this, the fresh-air inlets should come from all sides of the building, and be furnished with valves, so that the fresh-air supply may not be disturbed by heavy wind currents. The ducts should open into a common space, from which the air has free access to all the batteries of steam coils, whether they be distributed, or whether they be concentrated into one coil room. The sanitary conditions of the surroundings should determine whether these ducts open on the ground level, or at higher points in order to insure wholesome air. In these coil rooms each fresh-air flue should have its own set of coils, separated entirely from other coils by means of sheet-iron partition. This is necessary to prevent the long flues (which have the strongest drafts) from robbing the supply belonging to the shorter flues. The amount of heated surface in each section of the coil rooms is regulated by valves, which enable the engineer to turn on or cut off a part or all of the steam. In the event the construction of flues calls for horizontal sections, it is wise to put an extra coil in them to increase their aspirating power. A close-fitting valve, which may be raised or lowered by means of a chain passing into the room, should be a part of the attachment of each coil box. This valve is used to regulate the amount of cold and warm air, respectively, drawn into the fresh-air flue. With the proper construction of the fresh-air chamber and flues, and with the provision suggested to regulate the warm-air supply, it is a rare case for a building of ordinary size not to receive a sufficient amount of wholesome air. If the supply should prove inadequate, nothing less than the plenum system of propulsion will meet the demands of the case. It is thought by many experts that enough direct radiating surface should be placed in the rooms near the windows to counteract the leakage around the doors, windows, and other sources of cold air from the outside, and thus prevent a downward sweep of cold currents formed by the exposed wall of the room.

The discharge of the vitiated air is effected by means of a foul-air shaft opening near the floor on the same side of, but at the opposite corner from, the fresh-air inlet, and another, of a smaller aperture, near the ceiling. The former outlet should be a little larger than the inlet, to prevent perceptible drafts over the floor, and should be provided with a steam coil or loops of pipe, or a small stove placed near the bottom, to create suction sufficient to empty the room as often as eight or ten times per hour. As a rule, it is better to have the heating apparatus of these foul-air shafts independent of the heating system, so that an aspirating effect may always be produced regardless of weather conditions. Otherwise reverse currents may sweep the vitiated air down into the coil rooms, from which it may be drawn into other rooms, thus doubling the amount of impure air of particular rooms.

The vacuum system is likewise employed to discharge buildings of foul air, but its chief disadvantage is that it increases the leakage of rooms from the outside, thus requiring an extra amount of heated surface to make up the difference. The additional cost of the plenum and vacuum system, which may be employed with any method of heating, has prevented very general adoption, tho Professor Woodbridge has computed that the additional cost per pupil in the Lynn High School is only two and a half cents a day.

CONTAGIOUS DISEASES IN SCHOOL

BY T. A MOTT, SUPERINTENDENT OF SCHOOLS, RICHMOND, IND.

Herbert Spencer has said that "the first requisite of success in life is to be a good animal, and" that "to be a nation of good animals is the first condition of national prosperity." As the nation is an aggregate of individuals, the history of a nation is, in a certain sense, a history of its individual units. If it is our duty to educate the minds of the children, it is equally a duty to care for, protect, and train their bodies.

Our people believe that the open schoolhouse, free to all and attended by all, is the gateway to progress and national prosperity, and the best security for the liberties and independence of the individual citizen as well as of the state. All will admit that it is the sovereign duty of the state in this republic to provide the best educational facilities which the world's experience has devised for every child, not as a "benefaction, but in satisfaction of the natural and inherent rights of American citizenship." It is clearly fundamental that the state is bound to see that a suitable school is maintained within the reach of every child, and that the house and its management in their hygienic relations are above reproach. The duty of the state does not stop with the furnishing of a teacher and a room, but the children are entitled to a reasonable protection from disease, and to a physical training and development. For one to make a feast and invite his friends in large numbers to attend, and then carelessly permit poison to enter the food that is placed before his guests, producing sickness or death, would be condemned by all as criminal carelessness. Equally as gross a crime is it if the state, thru its officers, opens a school and invites, yea goes into the highways and compels, the children to come in, and then, thru criminal indifference, permits the poison of disease to strike down the members of the school.

Simultaneously with the annual opening of schools, diphtheria, measles, mumps, scarlet fever, and many other communicable diseases usually increase. This is caused partly by the neglect of school officers to carry out known hygienic laws in schoolhouses and about the school grounds. The congregation of large numbers of children into houses whose rooms and furniture are unclean, ventilation bad, and drainage inadequate, will always tend to spread poisonous germs of disease. Some pupils in the school may have just recovered from some communicable disease, or others may be from families that have been smitten, and, being infected, they transmit the germs to those around them who are susceptible.

The most common communicable diseases are cholera, yellow fever,

small-pox, scarlet fever, diphtheria, tuberculosis, typhoid fever, measles, mumps, itch, and certain diseases of the eyes and scalp.

The leading scientists of the country agree to the following statements as to the manner of infection:

Cholera and yellow fever are contracted in infectious districts rather than by contact with the sick. They are rarely communicated by a sick person to his attendants. In infected places the poison seems to be given off by the soil or from collections of decomposing organic material. In case of cholera, discharges from the sick are in a high degree poisonous to water and food.

In case of small-pox the disease is contracted by exposure to the emanations from the person of the sick, or from clothing that has been in use by the sick, or has been in their vicinity. This disease has, however, to a great degree lost its danger where the rules with regard to vaccination are observed.

In scarlet fever the poison is given off from the bodies of the sick as in small-pox. But there is no vaccination that will be of any aid in this disease. The patient may communicate it during the whole period of sickness or of convalescence. Clothing that has been used by the sick, or has been near them, is apt to contain the poisonous germs. These germs will retain their dangerous character for months after they have left the patient. Clothing that has been packed away for months or years may communicate the disease.

In diphtheria or membraneous croup the poisonous germs are given off from the affected surfaces, which are usually in the throat or nasal passages. The discharges from these surfaces are especially dangerous. The germs may be carried a short distance by the breath of the patient. All pet animals and clothing that have been about the sick are extremely dangerous. The poisonous character of the germs will last for years in clothing or in buildings that are not properly disinfected. It seems extremely probable that the diphtheritic germ or poison is capable of increase, independently of the sick patient, in the mouths of persons not susceptible to the disease; in damp places, such as sewers, cellars, and especially under old houses if the floor comes near the ground, leaving a damp, poorly ventilated space; and in accumulations of filth about the house. At all events, the disease often clings to such buildings regardless of all attempts to disinfect the premises. There can be no doubt as to the influence of bad hygienic conditions in maintaining the infection when once the disease has been started, and it is possible that they may at times originate it under certain conditions.

In the case of typhoid fever, as in the case of cholera, the poisonous germs are contained in the excretions of the body, especially the alvine discharges. From these sources the water is liable to be contaminated,

and from the water the milk and food. Besides, contaminated water, impure air, and gases are a great factor in extending this disease. It is known that this poison is in a sense volatile and is carried by the air, and is often known to be in foul gases arising from sewers, privies, and so forth, and that breathing these poison-laden gases will often produce the disease in those who are susceptible.

Tubercular consumption is acknowledged by most scientists to be a communicable disease. The sputum arising from infected lungs is surely poisonous to susceptible persons. This sputum dries and, becoming part of the dust of the room, is inhaled by all. Or the poison may be transferred by means of drinking cups and pencils to the mouths of others. This is not usually named in the list of communicable diseases that should exclude persons from the schoolroom. But it is now believed by the best physicians of the age that pupils and teachers having this disease should be excluded from all schools. It has been said that more persons die from tuberculosis than from all other diseases usually named as contagious. In cities where all afflicted with tuberculosis have been excluded from school the number of cases among children has greatly decreased.

The poisonous germ from measles arises from the skin, and is also thrown out by the breath. In the case of mumps it is always carried by the breath. In cases of itch and certain diseases of the skin, eyelids, and scalp, poisonous emanations fall off the body, become part of the dust of the room, and are thus brought within the reach of all.

In addition to these facts, it is undoubtedly true that most of these diseases are apt to appear in so mild a form that they cannot be detected by the usual observer. Mild forms of typhoid and scarlet fever are of frequent occurrence, in which the germs of diseases are as potent as if the patient were dangerously ill. In these cases the germs are spread and affect those that are susceptible as seriously as if the original case had been more malignant. Many cases of diphtheria are unknown to teacher or parents, and do not cause the child to be sick enough to complain. In these cases the sputum of the child, filled with germs of disease, is spread by the breath, by the drinking cup and bucket, and by pencils and slates. More than that, it has been clearly demonstrated that the diphtheritic germ will live and increase in the mouths and throats of persons who are not susceptible. The secretary of the state board of health of Indiana, Dr. J. N. Hurty, instances such a case in a school where a child having diphtheria was removed, and the building thoroly disinfected. After a week's time school was opened, and another case appeared within a few days. This child was removed, and the school again closed and the building disinfected in every way known to science. Again, soon after school opened, another child took diphtheria. Dr.

Hurty then called the school together, and prepared cultures from the spittle of all the children and the teacher. The disease germs were found to be in the teacher's throat. Yet she had not had the disease, nor did she have it. The drinking cups, the water bucket, the pencils, slate, or other medium had probably carried the germs from the mouth of the teacher to the children.

Only a month ago, in our city, a girl attending school, who was seated in a room where ninety pupils had their desks and spent more than half their time during the school day, had a malignant case of diphtheria three or four days before the child, the parents, or the teacher knew of it. When the doctor was called, the case had assumed the most dangerous form; yet no other children took the disease. In this school the ventilation is nearly perfect; the building and surroundings are clean and in as perfect hygienic condition as could be desired. The drinking cups and the closets are in every way ideal. No slates are used; no pencils are exchanged.

It is clear to all that, no matter how rigid teachers and school officers may be in excluding from the schools all cases of communicable disease, yet many forms of these diseases will appear in the school unnoticed. The poisonous germs are ever present in the crowded school. All these diseases are simply the result of concerted attacks of developed germ life upon the lives of susceptible persons.

In the light of these facts stands the paramount duty of all school officers and teachers to surround the schools with those conditions that will in the highest degree reduce the danger of contagion.

The first of these conditions is proper ventilation. The poisonous germs of disease are always present, and the highest protection lies in their *dilution and dispersion*. The steady current of air passing thru the room in a proper manner, diluting the poison and carrying it from the room, is the absolute condition of safety. Next to ventilation is cleanliness of the school premises and schoolrooms. In the filth that accumulates on the walls, floors, desks, in the cellars or basements, on the school grounds, many disease germs find a resting place and an opportunity to develop. Floors should be scrubbed; desks, wainscoting, and banisters should be washed and disinfected frequently. This is necessary, because disease germs may be planted upon the desktops and woodwork of the room by infected persons, and, being transferred by the hands of pupils to their mouths, result in disease.

The open water bucket should be condemned, together with the large drinking cups. The dipping into water of cups used by many is liable to introduce spittle into the water supply, and therewith the germs of dangerous diseases. Children should drink from small cups with rounded bottoms, holding about two gills, and the water be drawn from a running

stream or from faucets. The stream of water from a large faucet or from a pump will generally fill the small cup and wash the saliva from its edge. In the schools of Richmond we have from twelve to twenty faucets or running streams of water in each building of eight rooms, and use the small cups, believing that we thus avoid the danger of contagion in connection with the drinking.

Slates should be banished from the school on account of their uncleanliness. As the slate is frequently cleaned with the spittle, and as the damp slate readily collects the dust of the room, the danger of transmitting disease in this way is very great.

Pencils should never be collected and redistributed promiscuously, without first being sterilized by boiling or heating, or by a bath in formaldahide gas.

The cellars or basements of school buildings should be dry and the bottoms have cemented floors.

The closets or privies should be clean, and all discharges carried from the premises to the sewer by running water, or should be evaporated and burned in the dry closets. Vaults retaining the discharges are often dangerous.

Every building should have pleasant, clean lavatories, where soap and water are accessible to the children.

The drainage of the grounds and the building should be ample.

The water supply should be pure and wholesome.

All children should be vaccinated.

Filthy and unclean children and children from unclean homes should not be admitted to school.

School authorities should refuse admittance to schools of any person from any household where a contagious disease exists, or of any person who is affected with any evident or apparent communicable disease, or of any person who may recently have been affected with such a disease, until he presents a certificate signed by a reputable physician stating that the danger of infection is over, and the certificate is approved and indorsed by the health officer.

In times of dangerous epidemic all schools should be closed.

The above rules are taken in the main from those issued by the state board of health of Indiana, and are similar to those issued by boards of health in other states.

In the discussion of the prevention of disease in the schoolroom one can never omit the consideration of the general health and the nourishment of the children. The healthy, vigorous person with natural vitality is rarely susceptible to any contagious disease. Those most susceptible are the weak whose vital resisting powers are reduced by any cause. Among the predisposing causes to disease among children of

which the school should take account may be mentioned insufficient clothing and exposure to the cold resulting from poverty in the home, insufficient or improper food, physical exhaustion from over-fatigue, loss of sleep, disorders arising from bad habits in breathing and eating. Little has yet been done by the school authorities of America in regard to the questions here considered. Yet in many cities they are being scientifically studied, and many experiments are being tried. Physical exercises in schools and gymnasiums are doing much to better the physical condition of children and improve their habits of breathing. What can or should be done in regard to the food of children is a problem for each locality. In hundreds of mothers' clubs thruout the country the subject has been carefully considered. In a few cities the children in the poorer districts have been furnished a healthy lunch before each session of the school. The results of these efforts are in a measure still problematical.

In Richmond, as in other cities, we are insisting that the children be warmly clothed, and, when necessary, using the public funds to bring this about.

In all cities there should be a regularly appointed school physician, paid by the school board, whose duty should be occasionally to inspect the schools, and to examine teachers and pupils in suspected cases of disease. In this way only will it be possible to exclude from school many of the milder forms of contagion. His aid will be absolutely necessary if the attempt is made to exclude from the school cases of tuberculosis. He will be able in many cases to prevent the starting of epidemics.

State boards of health should be given large legislative and executive powers. Their local officers in cities and counties should be given power to enforce their rules in every particular. School officers should be subject to their direction. A board of health with only advisory powers will be of little value to any community. Human nature is everywhere akin. "The child is father to the man." There are few boys who do not resist at home and at school the exactions of authority. They insist on the right to exercise what seems to them to be their personal freedom in all cases where they cannot see that danger is ahead. "The man is but the whiskered boy." He resists the exactions of the law as curtailing his endowed rights. The laws providing for the quarantining of homes or districts where contagion exists, compelling the cleaning of homes of filth, requiring vaccination of children, prohibiting the use of vaults and cesspools, and other similar laws, are always resisted and disobeyed by large numbers of people, unless enforced by officers of the law.

Fifteen million children are in the schools of the United States. The first, if not the highest, duty which confronts the school officers and

superintendents is the health of these pupils. The school management, which fails to provide for the physical well-being of the children, at least to protect them from the poisons of contagious disease, must be branded as criminal.

DISCUSSION

SUPERINTENDENT J. H. SNYDER, Tiffin, O.—The purpose of this discussion is not to inquire which are the contagious diseases, or to investigate the nature or character of such diseases. Only competent physicians can do justice to such inquiry. While eminent physicians hold such different opinions in reference to these questions, professional modesty forbids that superintendents of schools, which are carefully guarded against contagious or infectious diseases by legally established boards of health, should engage in the controversy.

It is rather to consider them in relation to the schools; to determine what is the duty of the school officials in reference to their suppression and exclusion. In states where stringent laws exist, and efficient health officers enforce the laws, the duty of the school officer is plain and, in most cases, easily performed. In Ohio the laws require physicians in their practice to report to the health officer every case of a disease of a contagious character. It is the duty of this officer to instruct the principal or teacher of the proper school to exclude therefrom all children coming from the home of the patient reported, and to readmit them on the presentation of a certificate from the same officer. Thus little remains for the school to do more than to look carefully after the sanitary condition of the schoolrooms. By careful enforcement of these regulations, the suppression of most contagious diseases is usually fairly well accomplished. Most difficulty usually arises in their enforcement in cases of the more trifling diseases so common to children. But as serious sequelæ may follow almost all such diseases, a strict enforcement of the quarantine laws should always be required. In case of doubt as to the character of a disease, it is surely best to err on the side of safety. I have intimated that there are times when the duty of the superintendent is not so easy. I had in mind that disease, the announcement of the presence of which, even tho that presence be in an adjoining state, leads to an edict that every child in the schools must be vaccinated.

It may be easy for the superintendent to shift the responsibility to the health authorities, but it may not be so easy to convince those of little faith in the virtue of vaccination that the shifting has taken place. They may incidentally present authentic records to show that in pre-vaccination times the death rate from the dread disease was 18.8 per cent., while at the present time, in the vaccinated and the unvaccinated together, it remains 18.5 per cent. They may refer to the fact that a few of the European states that have had the most stringent laws requiring vaccination and revaccination by overwhelming majorities have repealed them. The enemies of vaccination may ask the superintendent who refuses to admit to the schools their children who have not been vaccinated, to explain the death of almost 2,000 vaccinated children in Montreal at the time of the epidemic there in 1885. They may even question the constitutionality of the law requiring vaccination. But in the end the law-abiding school officer must refer the matter to the health board.

No matter what the decision is in reference to the contagious character of consumption, every superintendent knows that teachers thus afflicted should be excluded from the

schools. Nervous conditions which render such teachers unfit for the duties of the schoolroom are too frequently manifested by them in peculiar moods, floods of tears, or flashes of temper. It is claimed by able physicians that the germs of disease exhaled by a consumptive are heavy enough to fall to the floor, without floating about in the atmosphere of the room. If this be true of all such bacteriæ, we may be able to find that the very common practice of oiling the floors of schoolrooms will change from a common fad to a valuable custom. Experience, too short, perhaps, to give much value to the statistics gathered from the records of the schools in our city, has led me to believe that oiled floors have had a perceptible influence in decreasing the amount of absence because of sickness among both teachers and pupils. It seems to me, in view of all the health boards are doing in our cities, that the most important work for school officials is to see to it that abundance of sunlight, properly admitted, be allowed to do its work in cleansing the rooms and in destroying the germs of disease; that rapid change of the air in the room may carry away the impurities resulting from this destructive work of the sun; and, as so many of the contagious diseases originate in conditions of filth, that most stringent regulations, based on the principle that "cleanliness is next to godliness," be enforced in the admission of pupils to the schools.

B. C. GREGORY, superintendent of schools, Trenton, N. J.—It occurred to me, immediately after my invitation to discuss the paper on contagious diseases, that there was really little to add to the main presentation, and certainly nothing to which exception could be taken. There is a collateral phase of the subject, however, on which statistics in my possession throw a little light, which may deserve a passing notice and engage a feeble interest.

I do not take issue in the slightest degree with the demand for greater sanitary precautions against the spread of disease. And I concur with especial heartiness in the increasing demand for medical inspection. Nevertheless, a plea may be made in favor of present conditions, not to prove that they are good enough, but to show that they are not so bad as supposed. If any apology were needed for essaying such a purpose, it might be found in this possibility: that the constant raising of the danger cry may alarm the public to such an extent as to lead to the withdrawal of children from schools. It is necessary, of course, to know how bad affairs are, but it can serve no good purpose to view them as worse than they are.

For a number of years I have collated the absence of teachers and pupils from sickness, and have obtained some statistics of death. Some data which would have been valuable in this discussion I have been unable to put in shape for want of time. I submit, however, certain figures which seem interesting, and offer a few—perhaps crude—inferences.

In the year 1895–96 we had in the city of Trenton a very serious epidemic of diphtheria and measles. On a total enrollment of 8,083 we had thirty deaths, fourteen of which were from diphtheria, four from measles, and two from typhoid fever.

Last year, and also during the year 1894–95, we were free from epidemics. I am thus able to compare an epidemic year with the preceding and the following years.

The numbers of days' absence of pupils from sickness during the three years under consideration were, respectively, 60,009, 92,437, and 58,145. That is to say, the absence during the sickly year was 154 per cent. of the absence of the year preceding, and 160 per cent. of that of the year following. This means an enormous increase of absence, and a great waste of school expenditure. Stating the facts otherwise: In the epidemic year 463 pupils, or over nine classes, were absent the entire year. During each of the two healthy years there were six classes of pupils absent the whole year.

There is a rhythm in the absence of pupils from sickness. January has always been high-water mark, except last year, when the maximum absence occurred in February.

The regularity of this rule is rather interesting. If we compare September with January during the three years under consideration, the effect of the epidemic becomes very apparent. To make the comparison we must reduce the totals of absence in each month to a uniform basis of twenty days. Having done this, we find that during the epidemic year the absence in January was 670 per cent. that of September, against 300 and 425 per cent. in the two other years.

Comparing the three Januaries, I find the absence that month during the epidemic year to have been 243 per cent. of that during the same month of the preceding year and 228 per cent. of the following year.

I have gone with perhaps tedious detail into this statistical inquiry, because I want to compare the figures with some others of a different character.

The inferences which seem to lie on the surface of the foregoing data are that contagious diseases impair the health of the school children to an alarming extent, and that the schools communicate contagion with fearful rapidity. These are the inferences usually made, and in my opinion they are utterly at variance with the truth.

For the statistics show that the absence of teachers during the epidemic year was also very great, and that it bore the same relation to the previous year and the following year as was the case with the children; in some cases the state of things was worse. But no teacher died of the contagious disease, and, to my knowledge, not a teacher was sick from diphtheria. In fact, as you well know, that disease does not often affect adults. Now, if the same abnormal degree of absence is perceptible in the epidemic year in the case both of pupils and teachers, it is not logical to assign a reason that does not account equally for both, and the contagion theory meets only one class of cases.

The following, briefly, are the facts: Absence of teachers from sickness during the epidemic year, 194 per cent. and 172 per cent. of the other two years respectively. The figures in the case of pupils were 154 and 160. Relation of month of highest sickness record to September, 1,811 per cent. in the epidemic year, against 336 and 304 in the two other years. Figures in the case of pupils, 670, 300, and 425. Relation of month of greatest absence in epidemic year to same in other years, 184 and 222. Corresponding figures in the case of pupils, 243 and 228.

If the absence of the pupils had been heavy and that of the teachers light, I should have been sure that the contagion had been spread in the schoolrooms, but the teachers' absence was also heavy, and this absence was not due to contagious disease. What cause can be assigned for the abnormal absence of both classes during this year?

One more consideration throws a little light on the subject. I have called attention to the rhythm of absence among the pupils. The rhythm is as evident in the rebound of the pupils' health after January as in the retrogression before January. They recover as quickly as they lose ground, and this is as true in contagious years as in healthy years. The absence in April and May corresponds very closely to that in October and November. That is to say, the closing months of the year are about as healthy as the beginning months; not infrequently they are a little better. I may say, by way of parenthesis, that this fact gives little ground for the supposed exhaustion that pupils suffer during the year.

When you turn to the record of teachers' absences, the figures tell a different story. It is less easy to discover a rhythm in this absence. There is a maximum of absence, however. It occurs, on the average, in March. In 1894–95 it was in April, in 1895–96 in March, in 1896–97 in February. Furthermore, there is little or no rebound. I could give figures, but they would weary you. Suffice it to say that in the epidemic year the absence of teachers in April and May was equal to the total absence in October, November, December, and June. The teachers do not recover their health. There are some serious deductions to be made from the data relating to teachers' absences, but they would not be germane to the present discussion.

The quick rebound in the health of the pupils, contrasted with the failure of teachers to recover, indicates that the cause of absence of both classes should be sought, to a considerable extent, outside of school sanitation. The pupils' record follows the weather, follows the season's changes, and must be due to colds and other complaints consequent on exposure, changes of temperature, insufficient clothing and food, wet feet, and unsanitary homes. The teachers suffer to some extent, but less, from these causes, and also from the steady lowering of vitality that goes on thru the school year; but the data in no way indicate that the school building is a serious factor. It does not follow, of course, that the adoption of additional sanitary precautions would not reduce the sickness record. Of course it would, just as improvement in home sanitation, better clothing, etc., would reduce the record. My contention is that the school is not responsible for the great sins laid to its charge. My opinion is that for many of the children the school is the healthiest place they find during the day.

The absence during the contagion year was very great, but the curve of absence follows the curves of absence of other years. It rises higher, however, from the base line. To account for this we have, in my judgment, to consider only three causes: (1) our sanitary precautions keep out a great many children who live in infected houses, and are not sick at all; (2) parents in epidemic years hasten to withdraw their children on the occurrence of slight colds or other disturbances, which ordinarily would receive scanty consideration; (3) the scare more than anything else depopulates our schools. It is against that scare, and not against proper precautions, that this paper is aimed.

I sincerely believe that our modern schools have very little to do with spreading contagion. We ought not to destroy our school attendance by unnecessary alarms. We divert the attention of the public from other possible channels for conveying contagion, which should be equally considered if the school is to receive so much inspection. I refer to Sunday schools and children's parties, in which sanitation is never thought of. During the epidemic in Trenton the health board concentrated its attention on the schools, but never in a single instance considered the Sunday schools. Children came freely from infected houses to Sunday school, and parents who kept their children from school for fear of diphtheria sent their children to these same Sunday schools to sit by these same children.

I had desired to indicate the bearing of the data on systems of artificial ventilation and dry closets, but time does not permit.

THE INFLUENCE OF MUSIC AND MUSIC STUDY UPON CHARACTER

BY PROFESSOR A. J. GANTVOORT, COLLEGE OF MUSIC, CINCINNATI, O.

Every great reform in education has been inaugurated by the recognition of some new ideal, which had been more or less clearly conceived.

A new curriculum in which some studies received more and others less attention, in accordance with the importance of their supposed bearing upon the attainment of the desired ideal, has always been the natural consequence.

Confucius, Plato, Aristotle, Loyola, Rousseau, Kant, Hegel, Herbart,

and many others, including the members of our own now famous Committees of Ten, Twelve, and Fifteen, all have had (and the living ones of course still have) some ideal which they have deemed the most desirable state for man to attain.

All these ideals have had one common tenet — the establishment of the true relationship which should exist between man and the universe. They have all differed only in their conception of that relationship. This relationship between man and the universe around him depends upon the place which he himself occupies in the moral order of things, and is shown by his habitual, everyday conduct toward all things animate and inanimate. This conduct, being the expression of the estimate which he places upon himself and all things in the moral or divine order of economy, is the expression of what we term his character, the expression of what man *is* at heart. We judge a man's character by his conduct, but we also judge what a man's conduct will be under given circumstances by our estimate of his character.

That character is always growing is shown by the gradual alteration in the conduct of children during the process of genuine soul and heart education. Childhood is the most favorable time for character formation, because at that time the character consists only of a number of tendencies or emotions.

These emotions are the springs which move the child to actions. These actions, oft-repeated, form habits. The habits of action acquired during childhood grow into everyday conduct, and this conduct results finally in character for the man that *is* to be.

The direction which this growth of character will take is dependent upon the indulgence on one side, and the restraint on the other side, which the emotions receive in this formative state. The rapidity of the growth will depend upon the environment, that is, the sunshine of approval, the shadows of disapproval, and the food which the emotions receive. The emotions which form the character of the child may be divided into two large classes, according to their natural order of development. The first of these classes consists of the egoistic emotions, in which the importance of self predominates; the second, the altruistic emotions, in which the soul strives to burst the imprisoning bars of self-exaltation, in order that it may expand and be free.

The egoistic emotions — fear, hatred, sullenness, cruelty, despair, antipathy, stubbornness, etc. — are the opposites, the enemies, of the altruistic emotions — courage, love, cheerfulness, kindness, hope, sympathy, docility, etc.

The archenemy of soul expansion, above all these, is fear. When fear is driven out, the soul expands into courage, which is a sense of the soul's triumph over its escape from the prison of self, in which it had

lain captive. What is fear but the preponderance of self? What is courage but forgetfulness of self? What is anger or violent temper but the feeling that the self has not been accorded the place which it feels it deserves? What are sullenness, stubbornness, despair, antipathy, and all the egoistic emotions, but assertions of the self? Can music dispel these, can it cast them out, and thus help the soul in escaping from the narrow prison of self? Can music lift the soul out of and above the confines and limitations of self, into a realm of soul expansion and soul activity, where it will have the benefit of the sunshine and air and room necessary to its fullest growth? If so, surely it deserves a place on the annual programs of this and every other body of educators. If so, surely it deserves a permanent and more prominent place in the school curriculum.

If, then, I can show you that music produces such a soul expansion that the base emotions are driven out and supplanted by beautiful, noble emotions, may I not hope that it will receive hereafter greater attention from this association as a body and from its members individually?

May I not hope that the future committees of ten or twelve or fifteen will give much more attention to the subject of music?

There is hardly one in this audience who will deny to music the simple power of recreation. But what is true recreation? Is it not the living of the soul during a short period in a more ideal world, where it is freed from all the material cloggings and hindrances and debasing causes which affect it in everyday life? Anyone who has ever observed the effect of a song, the effect of music, on a child who is temporarily governed by one of those egoistic emotions, must have noticed that when the child took part in the song, or even listened to it actively, those baser feelings, those assertions of the ego, were driven out, and that at the close of the song he had lost his hatred, his sullenness, or whatever egoistic emotion was dominant in him before, and that in its place the opposite emotion had taken possession. He had been lifted out of himself, his soul had temporarily lived in an atmosphere whose air and sunshine were the result of nobler, better emotions; and in breathing that air, in being gladdened and warmed by that sunshine, he had been recreated.

To restrain these egoistic emotions by preventing their outbreaks because of fear of punishment is not sufficient; to cast them out is not sufficient. They must be supplanted by nobler, better emotions; for do we not remember that, when a devil was cast out from a certain man, he was straightway possessed by seven other devils? The restraints placed upon emotions do not destroy the emotions themselves, but only temporarily cover up their manifestations. The emotions are still there. The soul itself must act and throw out the baser emotions, and by its own expansion fill the void just created with a nobler emotion.

The archenemy of soul activity is fear. If music can dissipate fear, it is a strong agent for soul activity. When fear is driven out, the soul expands in courage, which is a sense of the soul's triumph that the prison bars of self which had inclosed it had been burst asunder and the soul had become free. Who has not noticed the boy who, when crossing a dark street or passing a cemetery at night, whistled with all his might? Why does he do this? Who has not noticed the girl who, when she was compelled to go down the dark stairs or into a dark room, quieted her fears by singing, humming, and sometimes even whistling some melody? Why this almost, if not wholly, unconscious musical utterance? Because he or she was alone and felt the need of company, of society, to drive back the assertion, the preponderance of self. They had somehow or other learned, consciously or unconsciously, that musical sound would repress that self-assertion, would open the prison bars which self had placed around the soul, and would give the feeling of company, the whistle or the voice being company. Who has not noticed or read of times of panic in theater or public hall, when some dire accident was threatening, when people were becoming blind with fear, when self and the preservation of that self ruled, when men were likely to trample over women and children, how a strain of music has quieted their fears, or at least helped them in self-restraint, so that order was restored and a panic avoided? We can all recall such occurrences. Is it not strange that at such times the ear is not closed, but is ready to receive definite impressions?

Who does not remember the occasion of the Samoan disaster, when the captain of one of the ill-fated vessels caused his band to play during the storm, and thus quieted in a measure the fears of passengers and crew?

What is the purpose of the band in time of war? Who does not remember occasions in history where the drummer boy or the fifer rallied the panic-stricken soldiers into a re-formation of the ranks, which oft-times resulted in a victory? The word of command at such time was absolutely useless, but the music went straight to the soul and cast out fear. Who does not remember the army of Gustavus Adolphus, in the war for religious liberty? How the soldiers always knelt upon the battlefield for prayer, and then, starting into the conflict, yea, in the very heat of it, sang that glorious battle-hymn of the Reformation, "Ein' feste Burg ist unser Gott"? Who does not remember the stories of the martyrs who died at the stake, and how in song they lost all sense of fear and were endowed with a courage which was almost divine? The song with them led to a soul expansion such as could not be equaled by anything except religious faith. Numerous other cases might be adduced to show that music can supplant all the egoistic emotions, but in prov-

ing that it can overcome the most potent of them, fear, it seems hardly necessary to give instances beyond those already given.

Sound is the social agent, and musical sound the soul agent *par excellence*. Pain or sorrow or pleasure, expressed in music, moves us far more than the same emotions expressed in gestures or by the face. Somehow or other we recognize by the tone of voice the genuineness of the emotion far better than by words or by any other expression than that of sound. It is especially so with instrumental music, which does not contain words, but which has absorbed very largely the emotional, the expressive, elements of language. Go and hear the finale of Beethoven's "Eroica Symphony," and listen to the torrent of tumultuous joy which it expresses. Listen, also, to the immortal funeral march from the same symphony, and you will hear such an expression of grief, and Christian grief at that, as will move any soul into sympathy with that grief.

Music addresses itself directly to the emotions in a language understood only by the emotions. The modern development of music is a response to the need of humanity for an expression of these emotions, those soul feelings, which cannot find utterance in words, and for a medium which will calm those emotions or exalt them far beyond the power of words. Man was endowed with the power to sing, and surely that power was given him so that the soul might expand and lift itself far beyond the confines of the natural world which surrounds it.

Holy Writ contains many examples of how music exalts the soul and lifts it above all earthly surroundings into a purer, more ethereal atmosphere. I will cite but one case: In 2 Kings, chap. 3, we read the account of Elisha's being asked to prophesy. He declines at first, but when finally prevailed upon, notice what he asks: "Bring me a minstrel, a singer." And the fact is related that during the singing of the minstrel the spirit of God came upon him, so that he was enabled to prophesy. Does that mean nothing to you? Is not that an evidence of God's use of the power of music—to prepare man for the reception of whatsoever is divine, and also of the preparation given by music for the performance of the most supreme acts? Is it not an evidence that thru music's power Elisha was transported far above his surroundings, nearer to heaven and to God? And if it is, dare you as educators in a Christian land, whose education is based upon the precepts of Holy Writ, neglect or omit it in your systems of education, and give the very last and least consideration to an art which bears the very stamp of God's approval? Can you expect to see the children in your charge attain to the ideal which you have, when you neglect or allow to be abused such a power for soul expansion as the art of music?

Music is the most popular of all arts. It can reach and move the

unified impersonal soul of a crowd, and move it to noble deeds, and calm even the violent emotions of fear in a crowd. It cannot move to ignoble deeds. Music cannot express ignoble emotions. It can only express those which mankind should treasure. The love of labor, the reverence for duty and analogous emotions, the love of country, the love of nature — all these can be expressed in song. We, therefore, have songs of labor, of plowing, of spinning, of sowing and reaping. Those are emotions which should receive culture, which mankind needs. Songs of that kind exalt labor, exalt duty, exalt patriotism. That is one of the powers which music possesses — that power of exaltation of even the everyday common things of life, which in themselves contain the seeds of desirable emotions. Ignoble emotions cannot be expressed in songs. Who ever heard of a song about making money? Who ever heard of a song in praise of foreclosing mortgages, a song praising theft, or robbery, or cruelty? Those emotions cannot be expressed in song. The joy of making money is a joy which is the result of an egoistic emotion, which glorifies self alone; and so it is with the others. It is the idealizing power of music, the opportunity for soul expansion thru the right kind of emotions, that makes music possess such a beneficent influence upon character formation. Take, for example, the national songs of different countries. Take even our own national song, "America." You may recite it, you may hear it recited, and it will have some influence upon you; but if you hear it sung, every word, every thought becomes intensified, and moves you to action; but if you sing it yourself, when your *own* soul expresses those thoughts, then you begin to realize the full meaning of the words: "My country, 'tis of thee; Sweet land of liberty, Of thee I sing." So much, then, for the effects of music upon the growth of character.

Now as to the influence of music study. Music study, when rightly conducted in the schools, should have a very strong and favorable influence upon the formation of the right kind of character, but it can only do so when it is based upon the thought that music should enrich the capacity for enjoyment, for soul expansion, which man naturally possesses. It can only do so when the singing of beautiful songs, and the study of the contents of such songs, are the end and aim of music study. But alas, such is not the case in very many instances. The aim of many of those in charge of the musical instruction of the children seems to be the acquirement of a knowledge and understanding of all the different signs in music, rather than the contents of music itself. A great deal of the music instruction tends to the principle of public exhibition of how much the children know about the signs and characters of music, and their interpretation, instead of the enjoyment and the consequent feeling of soul expansion, which is the result of musical instruction if it be well con-

ducted. Many of these instructors seem to be possessed by a haunting fear that, unless the children learn all the characters in which music is expressed, in the very first years of school life, they have failed in their duty. But oh, the mistake of all this! The earliest instruction should awaken a love for music. It should make the child susceptible to the soul expansion which will be so much to him in after-life. He should not be burdened with the numerous signs. These should come slowly, as the desire for knowledge, which comes of a love of the art, is awakened. The music study, which in the earliest years of school life forces upon the child many of the dry husks of music instead of its soul, cannot result in anything like the soul expansion which should be the possession of the child after the first two or three years of school life, and I plead, therefore, for a more rational way of musical instruction, which shall give freer play to the noble emotions which finally should make up the character of the child.

When music study, in our schools, becomes based upon the fact that music is one of the greatest, if not the greatest, of all powers for soul expansion in the whole curriculum, because it lifts the child out of himself, because it etherealizes all earthly things, because it makes the noblest emotions more intense, and casts out the baser emotions, which cannot find expression in song—then music and music study will have a most beneficent influence upon the formation of character.

THE EDUCATIONAL VALUE OF THE TRAGIC AS COMPARED WITH THE COMIC IN LITERATURE AND ART

BY DR. W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION, WASHINGTON, D. C.

It passes for a commonplace observation to say that the proper study of mankind is man. From the version of the Delphic oracle, "Know thyself," down to the sententious maxim in Pope's essay, the dictum has passed with the ready acceptance given to a proverb, or axiom.

The poet Tennyson believed that, if we once thoroly knew "the flower in the crannied wall," we should know all that is and all that God is. If this be so, surely to know all that man is will be to know all that nature is. Indeed, man as an immortal being stands on the highest round of the ladder of nature and connects nature with the divine spirit. He, therefore, contains in himself the explanation of the purpose of the chain of beings rising from the senseless clod thru the plant, and animal, as far as the first stage of human history. But this purpose originates in

the divine purpose. Hence human nature is a revelation of the will of the Highest, if we take it in the comprehensive sense suggested by Tennyson's poem.

Doubtless, the knowledge of human nature, once fully reached, will explain the inorganic as well as the organic phases of nature; the external process of causality as well as the internal process of motives and deeds. Then mathematics will be read in the light of psychology; so will geology and botany.

At present, however, we lay more stress on the difference between human nature and material nature than upon their identity. Sometimes, too, we restrict the use of our term "human nature" to the aims and aspirations, the emotions and convictions, of man, and exclude the common, rational elements of his mind, such as we find treated in logic and psychology. In this restricted sense we not only separate the humanities from the nature studies, but we take a special province of the humanities, namely literature and art, and consider only its contents as revealing springs of action.

In the course of study we place on one side all the studies that belong to mathematics, physics, biology, and astronomy, and we add to these the studies of language and history. We then place on the other side the single branch of study known as literature. We speak of the numerous studies in the first group as relating to nature and mind in general, but we contrast all these with literature, and assert that the branch of study set by itself over against that group, namely the gems of poetry and *belles-lettres*, is the one that does more to give us a knowledge of human nature than all the others combined.

Thus, in old age, a man is apt to say of his studies in the elementary school: "What I learned of arithmetic, geography, grammar, and history has been useful to me, but it has not proved to be so thoroly practical as the selections from literature which I read in the school readers. For in them I learned to observe and express the feelings and emotions of the heart. I learned to trace these mere feelings in their growth into convictions and clear ideas. They became principles of policy, and finally inspired and guided the acts and deeds of my life. In conning our reading lesson we learned how a blind instinct becomes an emotion, then a well-reasoned thought; later on a conviction, and then an action, and last of all a habit. We noted all this in the lives of others, and also in ourselves. We came to know human nature in this important respect."

No matter how well equipped we might be as mathematicians or scientific experts of any kind, if we lacked the power of seeing this genesis of actions out of feelings in our fellow-men and in ourselves, our lives would become a chaos of misdirected endeavor. We never could adjust ourselves to our human environment; we should take offense where

none was intended, and make collisions with our associates. For we should first misunderstand their motives; next seize on the wrong means of persuasion and conciliation; finally end in misanthropy. With regard to ourselves, we should be equally powerless to control our passions and desires, not knowing whither they tended nor where they were to be repressed.

The narrow life can be lived thru without much knowledge of literature. Intuitive practice in reading the feelings of one's fellows, and in noting their effect on their actions which follow, fit the individual for his narrow sphere. But there is as much difference between the knowledge of human nature that rests entirely on individual observation of the people of one's environment and that founded on an acquaintance with the best literature as there is between an Indian doctor's acquaintance with plants and the lore of a skilled botanist.

Let us make this plain by inquiring into the essential characteristics of the literary mode of portraying human nature.

First we will note that there are two currents, or courses, of feeling and action, that of the particular individual and that of the social whole of the community in which he lives. There may be harmony or there may be discord between these; it depends upon the individual.

When at harmony with the social environment, the individual does not reveal the limits of his individuality nor the all-conquering might of the institutions of society. It is only in the collisions between the individual and the social order in which he exists that the whole of human nature is revealed in both its phases, as individual and as social whole.

Thus we have tragedy and comedy as the two educative forms in which human life is served up for us in literature. For the collision of the individual with the social ideal takes one of two forms.

Comedy shows us the individual arrayed against some settled way of acting or thinking, some ideal of society, and the discomfiture of his plans thru self-contradiction, but without destruction to the individual himself. The social organism in which man lives is of such a character that it converts his negative deeds into self-refuting or self-annihilating deeds. This occasions amusement to his fellows, when they see that he is not seriously injured by his irrational deed. The comic character has mistaken the limits of himself. He has not noticed how the institutions of the social whole reinfore him and render effective his individual deeds, if they are rational ones. To be rational, a man's deeds must not only tend to his own interest, but to the interest of the family, the civil community, the nation of which he is a part. His smaller self must reinforce his greater self, or else his greater self will reduce his efforts to zero.

But this comic side needs further discrimination from the tragic.

Tragedy arises from a serious attack on the social whole and the

recoil of the deed on the doer, so that he perishes thru the return of his deed. This is not all. There must be the justification of the individual's deed by the adoption of a principle from a social order different from that of the social whole which crushes him. He must act in the name of a greater self, or else his action will not be dignified enough to be called a tragedy. The death of the bandit, Karl Moor, in Schiller's *Robbers*, is a tragedy because it is not mere personal gain, mere selfish interest, that causes the collision, but a revolt caused by a tyrannous social whole whose rulers have done real or imagined injustice. We do not respect the mere thief, or the mere highwayman. But we respect the patriotic remnant who struggle against a usurping social whole, even tho we may feel satisfaction in their defeat by a more reasonable world-order. The Children of the Mist are described by Walter Scott, in the *Legend of Montrose* and in the *Heart of Mid Lothian*, as the remnant of a once powerful people among the western highlands of Scotland, never tamed by their many defeats at the hand of the encroaching Anglo-Saxons who had obtained the rich and fertile lowlands. They fiercely defended themselves to the last, like the famous chieftain Kocheeis of the Indian tribe (Apaches) in Arizona a few years ago. We respect the Children of the Mist, but we feel the necessity of their subjugation by a more rational civilization. But we do not respect the burglars that hide in the slums of our great cities. The tragic character makes a collision with his social order in the name of another social order, it may be of a less advanced world-order or of a more advanced one. Antigone defies the law of the king and offends against the state. But she obeys an older world-order which requires the burial of a dead relative by the living member of the family. This collision is made stronger by the art of Sophocles. He interests in the noble unselfishness of Antigone, while he casts suspicion of selfish ambition on the character of Creon, the king.

So, too, we are excited to pity and terror by the events which bring Œdipus into dreadful crimes thru ignorance. He, too, attacks the existing world-order by a newer one.

There is the tragedy of the life of Socrates, also, who holds up a new world-order to the Athenians, the first teacher in the world of the right of private conscience as against the established church of his time. Before Socrates there was no individual moral right—everyone was expected to obey implicity the social custom without questioning it. This tragedy, however, is called by Hegel the tragedy of Athens, rather than of Socrates. He drank the hemlock, it is true, but it was a triumphant death, for his was the entire future of the world history. Since his time there has been unceasing growth of the right of individual conscience among nations.

The tragic, we repeat, must have this collision of the individual against the social whole in which he lives, but he must be backed by the principle of another social whole, either a perishing world-principle or one of the future just beginning its career.

A mere attack against the state from motives purely selfish is criminal, but not tragic.

The commission of crimes and the capture, conviction, and punishment of the criminal make a story that interests us. But if we do not discover a moral principle in the mind of the criminal, we are liable to injury in dwelling on the details of the story. The *Police Gazette* is justly excluded from the family, because it educates toward crime rather than away from it. The story of *Jack Shepard*, as told by Ainsworth, and the other stories of like character, idealize the mere selfish revolt against the civil order. They are written from the standpoint of mere selfish individualism. The individualism that Socrates initiated was that of a moral individualism. Spend your life in the inquiry for what is right, and do not refuse the hemlock if it is your reward for preaching the right.

The death of Socrates was the tragedy of Athens. But the death on Calvary was the world-tragedy. But the world learned and learns its deepest lesson from that tragedy: not merely the right of individual conscience is taught by that, but the worship of sorrow, the sacrifice of the self as mere selfishness for the emancipation of other selves, the principle of divine charity, the missionary spirit.

Tragedy reveals the depths of human nature, while crime does not, because it shows us the struggle between two social ideals, an older and a newer, an earlier and a later. These are revealed in their fullness in the struggle.

As tragedy demands that the tragic character must be the bearer of a diverse principle of social order, so, too, does comedy require something more than mere capricious difference from prevailing custom, and something more than mere self-seeking at the expense of the social whole.

Spanish Cervantes has depicted for us the attempts of Don Quixote at resuscitating knight errantry. Knight errantry had been, a few centuries before, a very serious affair for all Europe. Chivalry was an essential epoch in the history of Europe, and there is no epoch in the evolution of modern civilization more important than it. For it was the desertion of the classic ideal for the Christian ideal—it was the celebration of this abandonment of the old ideal and the adoption of the new. The ideas of love, honor, and fidelity were consciously set up as the expression of the new freedom that dawned on the mind of Europe as a result of the world-view of Christianity. Each soul has an infinite destiny beyond the grave. All that is secular is secondary to this religious principle.

There were three crusades made as a result of this new consciousness: First, the conquest of the land containing the holy sepulcher — this was the outward crusade against Islam. Secondly, the inner crusade, the refutation of the Arabian interpretation or Aristotelian philosophy by the great thinkers, marshaled by such scholars as Alexander of Hales, Albertus Magnus, and Thomas of Aquino — this was the scholastic crusade. After these outer and inner crusades came, a little later, the discovery of America, the third crusade; against the darkness of outlying heathenism, Queen Isabella contributed her jewels to fit out the fleet of Columbus in the name of the holy church.

Knight errantry was a passing phase of one of the most serious of spiritual movements. And when we laugh at Don Quixote's adventures, we do not laugh at him as a madman or lunatic, but at the ineptness of the old-world form seriously set up in the midst of a comparatively modern world. Its mediations seem absurd when deprived of the principle of chivalry and its social order on which they had been established.

Just so in Walter Scott's story of *Woodstock*, and especially in that of *Old Mortality*, the excesses of Protestant individualism, both of Independents and Presbyterians, are found in comic situations, because brought against a more advanced or matured theologic view. They furnish comic and not tragic situations, because they do not involve the characters portrayed in destruction for their views, but only in futile acts and endeavors, endless self-contradictions.

Aristophanes ridicules, not the older world-views striving for re-establishment in his time, so much as the products of the new movements put forward by the Sophists and the freethinkers of that time. He took Socrates as his type and model of a Sophist. He ridiculed anything and everything that was offered as a substitute for the old customs, the Greek morality that had come down from the good old times. Nothing could stand up against the inextinguishable laughter kindled in the *Clouds*, the *Wasps*, the *Frogs*, and his other comedies. The bad went down altogether, and the good went down temporarily, in the person of Socrates. But Aristophanes did not save Athens from "the newness," after all. Alexander the Great, the pupil of Aristotle, the pupil of Plato, the pupil of Socrates, had to save Athens from the good old times incarnated in Spartan conservatism. The great, grand pupil of Socrates in the person of Alexander marshaled Grecian youth to war on Persia, and his conquests extended to India and Bactria, and Greek kingdoms took the place of Persian satrapies. We see how serious were the elements entering the most comic of all comedies, those of Aristophanes. He had serious intentions, but he did not show the deeds of the individual returning upon him to destroy him. His dramas showed only the futility of plan and purpose undermined by inherent self-contradiction.

We have in later comic writers, say Swift and Sterne, the production of comic situations by means of importing one nation's customs into another nation. Seen thru the eyes of one land or native country, the daily habits of another land or country seem absurd. The French word *outré* expresses it. Swift is an Englishman who goes to Ireland and acquires a habit of looking critically on the ordinary manners and customs about him. He does not ridicule the Irish, however, but his own countrymen, the English, and writes the voyages to Lilliput and Brobdingnag, everywhere showing up the inconsistencies and absurdities in the social and political life of England in the first part of the eighteenth century.

Sterne shows French and Belgian life thru English spectacles.

Our own Mark Twain shows us borderland life thru the eyes of the urban life of the Atlantic slope; and in turn he makes his most comic situations by showing us the borderland traveler, with his local prejudices and ignorance of the history of culture, making his journey thru the museums and art galleries of Europe.

But in all these examples we have one serious national order against another, the French against the English, or the American against the European, or the earnest pioneer life against the life of culture.

A definition of comic and tragic situations may be made as follows, using the distinctions of content and form: content standing first for the temporary, or transient, the local or individual interest, the less substantial side. When it is placed under the form of the permanent, the ethical or universal or substantial interest, it is seen at once as ridiculous. The form is a world too large for the shrunken importance of the content to fill. The special interest is given the dignity of the general interest, the local and provincial puts on the airs of the world-culture, and we cannot help but laugh at it. We have within us the psychologic reaction of making up our minds for a serious and universal interest, and then suddenly encountering the local and insignificant. We collapse with laughter—for laughter is the physical counterpart to the inner collapse of our ideas descending from the great to the small.

On the other hand, the content may be a serious matter—a collision of world-ideas. The person bearing the new or old ideal, and with all seriousness setting it up against the established usage, proposes a new content for which the existing form has no place. It would shiver that old form to admit it. The established form must destroy it and its bearer. We may act against the new content and kill the messenger that brings it, but we do it in pity and terror, for it is a tragedy. The new substance is too ample for the old form. The new idea and its bearer cannot yet be tolerated. His time is yet to come. It must be a tragedy under the present circumstances.

We take courage, however, in this thought, that new forms are on their way which will permit, without danger to the social whole, a greater freedom in the adoption and promulgation of new or old ideas. There will come a larger tolerance and fewer tragedies.

In concluding our survey of the tragic and comic, we may ask ourselves whether they belong to the sublime or the beautiful, one or both.

We are disposed to call the tragic the sublime and to see in the comic its opposite, which is said to be the ridiculous. So the opposite of the beautiful is the ugly. Certainly the comic or ridiculous contains the elements of ugliness, but in contrast with what? Certainly not with the sublime. It is the irrational overcome by the rational. But the beautiful is defined as the spectacle of the rational overcoming the irrational. It is a presentation, not to the reason or the intellect primarily, but to the senses. To the senses primarily, and only secondarily to the intellect or reason. Nevertheless, both activities, the sense and the reason, must participate in the perception of the beautiful. To the reason alone the beautiful becomes simply the true. "The beautiful is the splendor of the truth," said Plato—it is the glory of the truth seen by the senses. Just so the truth presented to us thru the will is the ethical, or rather the good. As the reason must be present and co-operate with the senses in the perception of the beautiful, so the reason must be present and co-operate with the will in the good.

The beautiful certainly includes the works of art in which the tragic and the comic, one or both, are presented. The sublime, therefore, may be considered as falling under the concept beautiful, if it is to be applied to tragedy. But it is better to make the sublime a separate idea co-ordinate with the beautiful, and not containing or contained.

The sublime is properly applied to that whose content and form are not commensurate or in harmony with each other. The Old Testament descriptions of God's power often make nature so inadequate that it is seen to be no adequate revelation of God's omnipotence. The result is an idea of sublimity, but not of beauty. The vast things of the earth, its mountains and seas, the sky and the rocky foundations of the earth, these, together with the sun, moon, and stars, are such inadequate manifestations of Jehovah that we conceive sublimity rather than beauty. The beautiful is an adequate manifestation, something in harmony with that which is manifested in it. The sublime reveals the spiritual as not revealable—that which is to manifest the spiritual is made very distinctly to manifest its incapacity to manifest—hence, we have an æsthetic contradiction, art refuting itself.

We now see, or may see, the educative function of the tragic and comic. For all art must treat as its best subjects the tragic or the comic phases of human nature. In each of these it makes us conscious of the

eternal elements of human nature—the divine-human in some contrast with the finite and transitory.

In no way can the individual learn to know the practical problems of human nature so effectually as thru art and literature. He learns to see how the deeds return upon the doer to bless him or to curse him. The individual learns to know his greater self, the social.

The world-view of a people gets its utterance in the national poets, and hence the great works of art, such as have been furnished by Homer, Æschylus, Sophocles, and Aristophanes for the Greeks; by Virgil and Dante for Italy, Molière and Cervantes for France and Spain, by Shakespeare for England, and Goethe for Germany, contain a vicarious experience. The types of character presented give the people their apperceptive material under which to classify the people they meet with in their lives and the deeds which they see performed.

We learn best the lesson of the deed which we see others perform. Without making the experience ourselves, we profit by seeing others make it. The experience of the poet thus becomes our own vicariously. Human nature recoils against direct advice and does not like to have personal applications made. But, as Aristotle said, the spectacle of the drama purifies the beholder. The lesson is more impressive and wholesome because it is accepted by us in our freedom and not imposed upon us by external authority.

VACATION SCHOOLS

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The vacation school is no longer an experiment. In New York, Boston, Chicago, and other large cities, it is recognized as one of the strongest forces for good in the summer life of the crowded districts. What, then, is a vacation school? The term as used in this paper means a free school which children between the ages of four and fourteen may attend during the summer months. Wherever such schools have been established, they have come to be recognized as a valuable ally to the regular public schools, and in many cities, notably New York and Chicago, there is a growing public opinion in favor of making them a part of the public-school system. Thus far, however, the vacation schools established have been supported, in nearly every instance, by private contributions. The school authorities have granted the use of the necessary buildings and equipment needed for manual training, but the salaries of the teachers and the cost of the materials used have been paid from special funds provided for the purpose.

The one exception to this statement is Newark, N. J., where the board of education established vacation schools as a part of the school system in 1886, and since that time has carried on the work each summer.

In advocating the establishment of vacation schools, the friends of the movement reason in this way: In a great city the children should not be excluded from the schools

during one-fourth of the entire year. In Chicago, for example, there are 225,000 children in the public schools. Why should all of them be turned out of the school buildings in the latter part of June and kept out until the first week in September? Some of them can leave the city during the summer months, but the greater number must stay at home. In the poor and crowded districts, home is not an attractive place thru July and August. Therefore the children swarm into the streets and come into contact with all sorts of demoralizing influences. Is it not poor economy for the city to spend millions of dollars of public money in the erection of buildings for the use of the children and then to allow these buildings to remain unused for months, while the children are running the streets, forming bad habits, and losing a great part of that which they have gained in the public schools during the previous year? Can cities afford to have their children go backward during the summer months, when they might be going forward? Is it right that children who must leave school at a very early age should be deprived of an opportunity that could so easily be offered to them?

There are many people who believe that not only the children in crowded city districts, but also children in the wealthier parts of large cities and in small cities, and even in country districts, ought to have the opportunity to attend vacation schools, where their activities could find an outlet along healthful, profitable lines. In support of this view they quote the plan followed by the children at Chautauqua, where each day, under intelligent direction, they study nature in the woods and fields and on the shores of the lake, under conditions that make it pleasant as well as profitable. This phase of the summer-school movement is, however, outside of the field of the present discussion. It seems desirable to consider here only those schools which have been conducted in large cities for the benefit of children of elementary-school age who would otherwise be on the streets, in the midst of those demoralizing influences which are especially strong during the summer months, or in crowded tenement houses.

The pioneer in the vacation-school movement was Newark. In 1886 the work in that city was started on a small scale, and it has grown steadily, until in 1897 there were nine schools, employing seventy-three teachers and having an average daily attendance of over two thousand pupils. They are all primary schools, having one session daily for six weeks and basing the work very largely upon nature study.

Boston soon followed by establishing vacation schools similar to those in Newark, but under private auspices. Since that time philanthropic people in Boston have contributed the funds needed each year to support vacation schools and play grounds, where the children could find amusement and recreation, as well as helpful teaching in various industrial and artistic branches. The industrial work is not confined to mere technical training, but includes a careful study of the materials used by the pupils in their sewing, basket weaving, leather work, cabinet making, and other occupations.

In 1893 the New York Society for Improving the Condition of the Poor conducted three vacation schools in New York city. The board of education provided the buildings and equipment, and the society paid the salaries of the teachers and bought the materials used. By 1897 the number of schools had increased to ten, and there was an average daily attendance of over six thousand pupils. The subjects taught included drawing and modeling, sewing, woodwork, and printing, nature study and map drawing, music, dancing, and military drill, language, commercial bookkeeping, and various plans for self-government and training for citizenship. Nearly all of the teaching was carried on without the use of books.

In 1896 the Civic Federation of Chicago conducted a vacation school in one of the most crowded foreign districts on the west side of that city. The board of education gave the use of a fine public-school building, in which there was a very complete equipment for teaching woodwork. The Chicago *Record* gave the entire school an excursion

to the country once each week. The work of the school was grouped around this excursion as a center. The subjects taught were nature study, woodwork, sewing, music, gymnastics, drawing, and modeling. Only 300 children could be admitted to the school, and nearly four thousand had to be turned away for lack of room.

In 1897 a vacation school was conducted in the heart of the Stock Yards district of Chicago, under the auspices of the University of Chicago settlement. Here again the enrollment was limited to 300, but the number of applications was far in excess of the accommodations. The subjects taught were woodwork, sewing, housework, nature study, drawing, music, and physical exercises, and a very practical form of training for citizenship was given thru the penny savings bank and the Clean City League. Frequent excursions to the country were made a prominent feature of the work.

These two schools in Chicago have aroused so much interest in the vacation-school movement that a number of public-spirited women have agreed to provide the money needed for the support of several schools during the coming summer. The school authorities take a great interest in the work. At the end of the first summer the president of the board of education recommended in his annual report that vacation schools be made a part of the public-school system. This recommendation has not yet been acted upon, because of certain defects in the Illinois school law, but as soon as these are corrected a strong effort will be made to place these schools under the direction of the board.

Among the other places where vacation schools have been established are Cleveland, Brooklyn, Indianapolis, and many smaller cities. The plan followed in each of these cities was similar to that described above.

If we examine carefully the work which has been done in the large cities named, we find that there is a marked difference in the several plans followed. In Newark the schools have been carried on only in the primary grades, and the work has been based largely upon nature study. In New York the subjects taught have included a considerable number of industrial occupations, and the chief aims have been, first to interest the children to attend such a school, and then to develop some technical skill which would give their work an industrial value. Children of both primary and grammar-school age have been admitted. In Boston the motive has been largely philanthropic, and there has been no concerted effort to make the schools a part of the city system. The main object seems to have been to keep a few children off the streets during the summer and to keep them interested.

In Chicago the chief aim has been neither industrial nor philanthropic, but educational. The teachers have tried to gather in as many children as possible, between the ages of four and fourteen, and, while using the freest methods, to make a systematic effort to develop them on all sides. They have made a careful study of the children enrolled, and have tried to help them at the point where help was really needed. Many of the pupils did not know the common animals by sight, had never seen lake Michigan, and had never picked a flower in a field. They were taken to the lakeshore or to the country every week, were encouraged to observe and ask questions, and were allowed to gather materials that could be studied afterward in the schoolroom.

Many of them were foreigners and knew almost nothing about the city and the country in which they lived. So they were given instruction in civics and were encouraged to perform some of the duties that devolve upon every good citizen. The boys were eager to "make things." They were taken into the shop and taught how to use the wood-working tools, how to read a drawing, and how to use their hands.

Many of the girls came from homes which were not comfortable and were not attractive. Every day they were taken into a class-room divided by screens into several smaller rooms, each of which was furnished with the things needed for teaching the care of some room in the home — the bed room, the dining room, the living room, or the

kitchen. They were taught how to care for the home and how to make it attractive, and some of them learned for the first time in their lives that in housekeeping there is something besides mere drudgery.

Some of the children had a passion for color, but had never before had an opportunity to use chalks or water colors. In the vacation school they found this opportunity, and they made the most of it. Their teachers were delighted with the results, and many children, supposed to be almost hopeless in the regular schools, produced really strong drawings in the vacation school.

Nearly all of the children showed an interest in music, and, after spending an hour every day for six weeks in the singing classes, the school, as a whole, was able to do good chorus work.

In planning the work done along each of these lines, the interests of the children were studied very carefully, and each day the methods used, as well as the materials presented, were chosen in direct reference to the interests and the needs of the pupils.

If the vacation-school movement can be developed along educational lines rather than along those which are industrial or philanthropic, it will come to be recognized as an effort to do something more important than increasing the industrial skill of a few communities, or attempting to help a few poor children here and there to have a good time in the summer. It will be recognized as a movement intended to develop in our cities a social institution that has become a necessity. In the early part of this century only 8 per cent. of the population of this country lived in cities. Today nearly 35 per cent. live in cities. At that time foreign immigration did not threaten to fill our country with people whose education was defective, whose traditions were different from our own, who had very little in common with American citizens. Today immigration brings thousands of such people to our shores, and a large proportion of them settle in cities. They form communities in which one could walk for blocks without hearing a single word of English. Can we afford to neglect any opportunity for bringing these people into touch with all that is strong in American civilization?

In seeking for an answer to this question, the vacation schools which have been conducted in Chicago have had some very definite results: (1) they have exerted a marked influence on the social conditions in the communities where they were established; (2) they have had a helpful influence on the work of the Chicago public schools; (3) they have helped to create a strong public opinion in favor of some of the newer ideas in education.

Since the results achieved in the two Chicago schools were very similar, strong illustrations might be taken from the report of either of the schools. For the sake of unity, however, the illustrations given here will be drawn entirely from the report of the Seward vacation school, conducted in the Stock Yards district during the summer of 1897.

1. The influence on social conditions in the neighborhood of the school. The Seward school building is located in a neighborhood where, altho Germans and Poles, Jews and Bohemians, Italians, Scandinavians, and Irish live side by side, they are not always on the best terms with one another. When the teachers in the vacation school tried to find a starting point for their effort to train the children to be good citizens, they discovered that there was no feeling of brotherhood between the several races. In many cases the relation between families, or between the various groups of families, was, at best, an armed neutrality. So the teachers said: "Let us first prepare a statement of what we believe is the true idea of the duty of every citizen, and let us form some organization that will realize this idea among the children, if possible." The idea was expressed by Miss McDowell in what she called a "civic creed." Every morning all of the teachers and the pupils gathered in the school hall for opening exercises. They sang a patriotic hymn, saluted the American flag, and then repeated the civic creed, as follows:

"God hath made of one blood all nations of men, and we are his children, brothers and sisters all. We are citizens of these United States, and we believe our flag stands for self-sacrifice for the good of all the people. We want, therefore, to be true citizens of our great city, and we will show our love for her by our works.

"Chicago does not ask us to die for her welfare; she asks us to live for her, and so to live and so to act that her government may be pure, her officers honest, and every corner of her territory a place fit to grow the best men and women who shall rule over her."

The children learned to feel that the sentiment expressed in the patriotic hymn, and in the creed, should find some practical realization, and that no citizen is really loyal who does not "show his love by his works."

So they organized a "clean city league." All of the older children, both boys and girls, belonged to the league, and all pledged themselves to do their part in trying to keep the school premises and the neighborhood clean and free from litter of all kinds, (1) by not throwing down papers and refuse that would make it dirty, and (2) by helping the city to see that it was systematically cleaned.

One teacher gave her entire time to the work of the Clean City League. On the first day she talked with the children about the condition of the neighborhood, and asked them if they were satisfied with the appearance of the streets and alleys, and yards and garbage boxes. At first they seemed to be perfectly satisfied, but soon they learned to observe more carefully, and they reported a great many things that were not as they should be — sidewalks broken, streets dirty, alleys filled with refuse, etc. The teacher gave them systematic instruction, based on the city ordinances providing that the city shall be cleaned by contractors who are employed by the city authorities and paid with money contributed by the taxpayers. She also explained that, if a contractor fails to do his work, it is the duty of every good citizen to report the failure to the city authorities; that, if a contractor accepts the money and neglects the work, he is cheating the taxpayers. As soon as the boys in the neighborhood were convinced that the people were really being cheated, they became very eager to stop the cheating at once. Some of them made twenty-five or thirty complaints a day of violations of the ordinances. They watched the work of the contractor in that ward so closely, and made such prompt reports of his shortcomings, that he could not shirk, and before the end of the summer there was a great change in the appearance of the neighborhood. Streets were swept, alleys cleaned, garbage boxes emptied, and sidewalks mended, where all had been neglected for months at a time before the league began its work. The children and their parents realized for the first time that they had a right to go directly to the city hall and demand that their neighborhood be cleaned. They learned that every citizen has rights that must be respected by the city authorities, if the citizen demands it.

The children also learned that there is a close relation between the cleanliness of the city and the health of its citizens. In the league they dealt with some of the conditions which affect public health, and in the housework department with some of the home conditions which affect the health of individuals and families. Every child was taught the value of personal cleanliness, and the school maintained three showers and a tub all summer, and found good use for them.

The penny savings bank was also an influence for good in the community. The children were helped to form habits of thrift and economy, and encouraged to save their pennies instead of spending them for immediate personal indulgences. Since the vacation school closed, the bank has been maintained by the settlement, and each week many of the children who were in school go to the settlement and make their small deposits.

The school also exerted an important influence on the home life of the community thru the teaching of housework. The girls practiced in their homes what they learned in the school. It was very encouraging to the teachers to feel that they were influencing

the life of the neighborhood in the very place where their influence would be the most helpful — i. e., in the home. So much for the results in the community.

The second definite result mentioned above was the influence on the regular work of the public schools. This was exerted in a number of different ways:

(1) The public-school teachers who visited the vacation school were helped to gain a clear idea of what may be accomplished by the study of nature in a school where it is taught with illustrative material instead of thru the medium of books.

(2) They were able to observe the effects of school excursions in which the pupils gained new experiences, gathered fresh materials to be studied in the class-room, drew directly from nature, and learned to observe carefully and to record the results of their observations.

(3) They were given a practical illustration of the educational value of bench work in wood in every school year from the kindergarten to the high school. In the Chicago public schools manual training has not yet been made an organic part of the curriculum. It is true that seven thousand boys in the sixth, seventh, and eighth grades of the public schools spend an hour and a half each week working with tools, but the manual training has not been developed on the basis of a sound psychology, nor has it been brought into close relations with the other subjects in the curriculum, and it has been confined entirely to the upper grades.

The vacation school gave a practical demonstration of some of the educational aspects of manual training: its value in teaching number to the first-grade children; its value in the study of form and developing a sense of proportion and skill in measurement; its value in forming good habits of thought and of action. Many teachers realized for the first time that manual training really means mental and moral development, and that, instead of being an isolated special subject, it is a method that may be applied in every grade of school work.

The work done with boys who were not interested in study had some very marked results. The regular teachers in the Seward school say that some of the boys who had been especially troublesome during the previous year are now showing a real desire to do good work. This seems to indicate that the vacation school, by developing the children on all sides, aroused in them a keener interest in their regular school duties and an ability to perform these duties better than would otherwise have been possible.

It is, therefore, safe to say that the vacation schools have exerted a very helpful influence on the regular public-school work. They have helped pupils who were hard to reach by the usual methods; they have helped teachers who wish to come into touch with new ideas in education; they have helped school authorities who were glad to see an educational experiment station testing some of the newer plans for school work.

The third definite result mentioned above was that they helped to create a strong public sentiment in favor of some of the newer ideas in education.

This result was largely due to the way in which the daily papers supported the movement and described in their columns the work that was being done. It was also due in part to the favorable impression made on people who visited the school. Nearly every visitor felt that, when the pupils in a school are so deeply interested in what they are doing that they pay no attention to the people who are coming and going all the time, and when the teachers in that school can give their time entirely to teaching, instead of largely to discipline, there is something in the work of this school that is worthy of careful study with a view to more general adoption.

The following are a few of the conclusions reached after making such a study. They merely serve to emphasize the fact that the organizers of a vacation school, however free in defining their methods and in outlining their curriculum, must recognize the same principles of psychology and the same laws of individual and social growth that should be recognized in planning the work of every school:

(1) That interest is at the foundation of good discipline and good work in school.

(2) That in dealing with troublesome boys manual training may be made a very important factor.

(3) That the success of any school depends less on the use of books and a fine building and a complete and expensive equipment than on the skill and interest and enthusiasm of a strong teacher.

(4) That housework may be so taught in a school as to be truly educational, and at the same time to exert a very helpful influence on the home life and social conditions in the neighborhood.

(5) That the study of the laws of public health and of private hygiene, and the direct application of this study in the affairs of everyday life, can and should be made a part of the education of every child.

(6) That in the study of the world in which we live (usually grouped under the heads, "geography" and "nature study") far more can be accomplished by intelligent observation of nature herself than by trying to study her thru printed descriptions.

(7) That the work in civics and the training for citizenship may be so planned as to be a living force in a school, and not merely an intellectual exercise in the principles of popular government.

(8) That music is one of the most essential elements in the course of study — not the music which confines children to the reading of notes and the singing of exercises and scales; but the music that gives them an opportunity for the free expression in song of the feelings, desires, and aspirations which represent the highest and truest part of their natures.

(9) That manual training, carefully planned, may be made the strongest educational factor in the work of a school, i. e., the element in the school curriculum which is most important in training the minds of both boys and girls and in developing their characters. The manual training that appears to be most successful with boys of the elementary-school age is bench work in wood. The manual training that has produced the best results with the girls (especially those of grammar-school age) is housework and cooking. Both forms may very profitably be made a part of the work done in a vacation school, if the equipment can be obtained.

In outlining the plans for a system of vacation schools, the next question to be answered is: Should they have a well-defined curriculum, and, if so, what should this curriculum include? It may be well to mention first some of the elements the curriculum should not include. It should not cover the same ground as the regular course of study in the public schools, since it is not the function of the vacation school to educate the bright child beyond his grade, nor to bring the backward child up to his grade. It should not provide for a purely industrial training, since the vacation school is neither a professional nor a trade school. It should not cater to the whims of the children, since whatever is put into the curriculum will interest them, in any event, if wisely planned, and they are really unable to choose for themselves that which be best for their development. In planning the curriculum the organizers of a vacation school should take into consideration:

1. The special aim which they desire to accomplish. This will depend in each case on the character of the community and on a number of purely local conditions.

2. The possibility of using museums, parks, and excursions to the country as aids in the work of the school; and

3. The feasibility of providing equipment enough to give every child some form of manual training every day.

The subjects to be taught can then be chosen with reference to these conditions.

If possible, every child should have manual training, nature study, drawing, music,

physical exercises, and some form of training for citizenship each day, and an excursion to the country or to some other place of interest every week.

The teachers should be chosen with great care, and paid enough to make it possible for them to do this work in place of part of the work of the regular school year. The buildings and equipment should be provided by the board of education, and the schools should be supported by the board.

These recommendations are based directly upon the experience already gained in several of our large cities. In each of them the movement is growing steadily, and in each the vacation school, as we find it today, seems destined to become an important part of the public-school system in the near future.

CONTINUOUS SESSIONS, WITH SPECIAL APPLICATION TO NORMAL SCHOOLS

BY IRWIN SHEPARD, PRESIDENT STATE NORMAL SCHOOL, WINONA, MINN.

The public-school system of the United States, in its organization, subjects of study, methods of teaching, and discipline, embodies the relics of many customs and conditions which have ceased to exist. The extent and force of these traditional elements appear in such features as the continuance of the district as the unit of school organization; the limitation of the school term to little more than half the year; the general closing of schools for the long summer vacation, and the persistence of the three R's as the essentials of an elementary training.

The conservative force in our national system of education is the strength of tradition. This conservatism often binds the teachers more strongly than the people, for it frequently happens that the former have progressed more slowly than the latter, and have yielded tardily to the advanced demands of public opinion.

The traditional close classification of the graded schools, with its rigid system of annual promotions, altho long since condemned by public sentiment, still quite generally prevails; or at most has yielded only to the extent of substituting biennial for annual promotions.

The method of determining qualification for promotion by written examinations alone was generally retained long after the people distrusted its efficiency and even demanded its discontinuance.

The three months' annual vacation season has come to be regarded by most teachers as a necessity as well as an inalienable right, and any disposition to lengthen the school year is generally looked upon as an unjustifiable encroachment upon this right.

It requires some courage to suggest, even in a convention of progressive superintendents, that other seasons than summer time may be equally profitable for vacation purposes, and that the intellectual work of the

schoolroom may be as well done in summer as the intellectual work of other callings.

The average school year for the United States is about seven months. In many places, especially cities, it has been extended to ten months in answer to popular demands. It is not entirely clear why the extension should stop here. In fact, very good reasons can be given why the school should be open as continuously as the factory, the workshop, and the store.

If it is replied that pupils and teachers need two or three months annually for rest and recuperation from the intense strain and pressure of the year's work, it may be questioned if a system which produces strain and pressure so near to the point of exhaustion is not unwise and indefensible, and if a distribution of the same work over a longer period would not be wiser, tho it involved longer, or even continuous, sessions. It is certain that the point of efficient work on the part of both teacher and pupil is passed long before signs of strain, over-pressure, or exhaustion appear.

The annual vacation itself, deemed so essential for rest, contributes in no slight degree to the burdens of the already overtaxed year which follows, by the necessity for recovering the loss incident to the breaking down of intellectual habits and the waste of acquired knowledge during the long vacation, even if no more serious results appear.

There may be certain valuable compensations for the long school vacation, when the pupil can turn to some helpful occupation, as may usually be done in rural communities; but this is seldom the case in cities, or even small towns; therefore the question of continuous sessions *versus* short school years and long vacations belongs rather to the graded than to the rural schools.

The profitable employment of the time of children of school age during the long summer vacations is often the most serious and perplexing problem that confronts parents living in cities and towns, even under the most favorable circumstances; while in the case of children living in crowded districts of large cities, or in the saloon-cursed village, it becomes a question of vital importance to society as well as to the family.

It is not difficult to conceive of such an adjustment of school work, rest, and recreative occupations that continuous attendance upon school may not only be free from overwork or strain, but may furnish the most healthful and enjoyable life that a child can live; especially if vacations *may* be taken, without prejudice to progress, whenever needed or whenever the time could be otherwise more profitably spent. The ideal school life is that of the most healthful living, and does not admit the necessity for recuperation from overtaxing or unhealthful requirements.

However, the plan of continuous sessions does not necessarily involve

continuous attendance on the part of the pupils or continuous service by the teachers. It means, rather, continuous opportunities to the pupil for attendance on regular school sessions, and relief to the teachers from enforced vacations, always annual and always at the same season.

In view of the growing demands for vacation schools, especially in large cities, it is important to determine whether these schools shall be preventive and sporadic, without organic connection with the school system; or shall be constructive, progressive, and so adjusted as to contribute to advancement in the regular courses of the schools or proportionate relief from the daily requirements of the following year. A division of the present school year into three quarters of twelve weeks each, with quarterly promotions, would be the first and most important step toward the organic connection of vacation schools, as a regular part of the school year, with the work accredited as such.

The question may be asked if as much work can be accomplished in the twelve weeks of a vacation quarter as in any other quarter of the year. We have come to understand that the ability of anyone (children especially) to do intellectual work is dependent upon individual vitality rather than atmospheric temperature. We know that the vitality is lowest in winter and early spring, and at its maximum in late spring and summer. The general experience of summer-vacation schools confirms the belief that as much and as effective work can be accomplished in summer time as in any other part of the year if the early morning hours are substituted for the afternoon session; while the opportunities to pursue the various forms of nature study excel those of any other season.

If, however, continuous *attendance* is not desired, continuous *sessions*, with the quarter of twelve weeks as the promotion unit, would make possible the *distribution of vacations* thruout the year and the relief of crowded rooms to a corresponding extent; or, in other words, would increase the school accommodations by 33⅓ per cent.

Is it a wise policy for a city whose enrollment exceeds its seating accommodations to close its buildings for three months of the year, if by any plan of administration these buildings may be made available to relieve the excessive demands of the other nine months? Under the pressing necessity everywhere for greater school accommodations, is it justifiable that the common-school property of the nation, valued at $500,000,000, should be permitted to lie idle from three to five months annually? Compulsory school attendance and compulsory exclusion from school during the long vacation are antagonistic policies.

The general tendency of the educational world to "hibernate" in summer time is contrary to all of the analogies of nature as well as of life in other callings.

The great increase in the number, importance, and attendance of

summer schools is not more significant than the fact that this attendance is largely made up of teachers in regular service, who are pleased to devote no small share of a meager salary and of the annual vacation to professional advancement.

The reports of the United States commissioner of education show that 75 per cent. of the teachers of the country enter upon their work without any special training whatever, while the training of a large share of the others is much less satisfactory than is required in any other profession. Few who continue in teaching resign to make further preparation. Therefore the training of the teacher *while in service* is a problem of the utmost importance.

This problem would seem to be not difficult of solution when we reflect that the school year for the entire country averages but seven months and rarely exceeds forty weeks. No other calling affords such generous vacation leisure for self-improvement.

The difficulties of the problem lie in the fact that the three to five months of enforced vacation include or coincide with the annual long vacation of the normal schools and all higher educational institutions.

Teachers' institutes and the summer schools are designed to supply the demands for vacation opportunities for professional improvement not offered by the normal schools and colleges; either because their doors are closed, or because their courses of study and term arrangements do not enable a teacher to use with profit the long vacation periods.

While summer schools and institutes have accomplished much, they do not by any means solve the problem of the efficient training of the teacher in service.

The state of Minnesota has led all other states in the establishment of vacation training schools for teachers. From forty to fifty of these schools are in session every summer, for four weeks each, with a total attendance which usually equals or exceeds the entire teaching force of the state; while, until last summer, all of the four normal schools of the state, equipped at an expense of more than a million dollars, were closed, their laboratories and libraries deserted, and their faculties scattered, supposedly taking much-needed vacations, but many of them in reality teaching in these same summer schools, often under most adverse conditions as to surroundings and appliances.

In September, 1895, when the faculty of the State Normal School at Winona reassembled after the annual vacation, during which half of the members had been teaching in the summer schools, a series of special meetings were held to consider the relation of the normal schools to these summer schools. A few conclusions were soon reached:

1. That the phenomenal growth of summer training schools for teachers indicated a demand which the normal schools had not met.

2. That these summer schools were creating new demands which only normal schools could efficiently meet.

3. That, under the existing conditions for admission to teaching service, it is quite as much the proper function of the normal schools to provide for training teachers in service as to furnish a preparation for entering such service.

4. That the rural-school teachers, with an average vacation of five months each year, furnished at the same time the most needy and the most available constituency for such training.

5. That it is an indefensible policy to close the normal schools during that period of the year when teachers are most at leisure to attend school.

6. That the terms of normal schools should be so adjusted in time that the usual long vacations of teachers could be utilized for further preparation, and that the courses so provided should not be special, but regular and progressive, and should constitute organic parts of the full courses offered.

It was decided to recommend, and if possible secure, the adoption of the following general plan:

1. The school year should be divided into four quarters of twelve weeks each, commencing respectively January 1, April 1, July 1, and October 1.

2. The courses of study should be organized by quarters — the work of each quarter constituting a full unit on which credit should be given whenever completed.

3. Classes should be graduated at the close of each quarter and new classes organized at the opening of each quarter, if necessary.

4. Special classes should be organized for graded-school teachers for the first six weeks of the summer quarter (July 1 to August 15), and this work should apply upon regular courses with provisions for completing the quarter's work by non-resident study during the ensuing school year by correspondence.

5. Since the chief aim of this plan was to bring the normal schools into more helpful relations to the rural schools whose interests they were primarily created to serve, the quarters should be so arranged that a rural-school teacher could teach the usual winter term of four or five months — which would always come within the autumn and winter quarters (October to April) — and attend a normal school one or both of the remaining quarters, with a reasonable vacation; or he could teach the entire school year (October to July) and attend one full quarter each year (July to October).

In this way progressive courses of normal-school work could be completed without withdrawing from rural-school service. This alone would be a distinct gain to the teaching supply of the rural schools.

Incidentally this plan would prove a boon to hundreds of self-supporting young men and women, from whom the best teachers of the state are drawn, who would be enabled to work their way thru the normal-school courses, with little difficulty and with little, or no, loss of time from teaching service.

It was believed that the advantages of training received while alternately teaching and attending school would also commend the plan.

The plan was subsequently approved by the presidents and faculties of the other normal schools of the state and presented to the state normal board for adoption. After full consideration for a year, it was unanimously adopted and steps taken to secure the needed appropriation for putting the plan into operation in all of the normal schools of the state. It was estimated that an increase of 25 per cent. in revenue would cover the expense of the proposed increase in the length of the school year by 33⅓ per cent.

The teachers generally thruout the state approved the plan and gave it active support. Sixty-two out of eighty of the county superintendents, and almost an equal proportion of city superintendents, joined personally in urging upon individual members of the legislature the advantages of the plan. No more popular educational measure ever came before the legislature of the state. The year 1897 was not a favorable one in which to secure appropriations for new or untried measures. The avowed policy of the legislature was to grant sparingly appropriations for the actual necessities only of the state institutions, but nothing for enlargements. Yet, so great was the confidence in the plan, and so earnest was the general demand for it, that the full appropriation asked for the two older schools—at Winona and Mankato—was granted, a larger increase than had ever been granted for extension of normal-school revenues in any one year in the history of the state.

On July 1, 1897, these two schools entered upon the new plan. Duplication of the work of the summer schools was avoided. Students were not admitted for less than a full term or quarter. Those only were admitted to the six-weeks' special courses whose schools would begin before the close of the quarter. Rural-school teachers were not admitted for less than the full quarter of twelve weeks. At Winona the standard of admission was radically advanced to the point of admitting only graduates of high schools or teachers actually in service.

Altho the announcement of the plan was not made until late in May, and forty county summer schools, enrolling 7,000 members, were in session thruout the state, the attendance during the summer was all that could be desired in numbers and surprisingly good in quality. Five hundred were enrolled in the two schools. At Winona 15 per cent. of the enrollment were former graduates of the school, all occupying important posi-

tions as teachers in the state, who had returned to avail themselves of this opportunity to enter upon the work of the recently extended advanced course; 40 per cent. were graded and rural-school teachers; 40 per cent. were high-school graduates. Only 5 per cent. did not belong to one of the above named classes. The average age was twenty-three years and the average teaching service four years, varying from one term to twenty years.

It was predicted by some that the model or training schools could not be maintained during the summer months; but here again the success was marked, notwithstanding the fact that these are tuition schools. Many parents have transferred their children permanently to the model schools because of the evident advantages of continuous sessions. In the model schools promotions occur quarterly. Vacations of one quarter may be taken any quarter of the year, either semi-annually, annually, or biennially; or the pupils may attend continuously, taking full or partial work with corresponding advancement, if such attendance is deemed advisable.

The advantages of these various options are quickly seen, and varying plans are chosen to suit individual pupils. The work of last summer's quarter was not more exhausting to teachers or pupils than that of any other quarter, nor has it appeared to be less efficiently done.

No year in the history of the schools has shown so large an increase in enrollment as the present. While the lengthened year will show a proportionate increase in results in graduates and numbers instructed, the most evident advantages appear in the large number of teachers in service who are preparing to take up regular courses while continuing their work in teaching; while many students who formerly could not see the way to complete more than the short elementary course now choose the full advanced course under the facilities offered for vacation attendance.

Continuous sessions do not *necessarily* involve continuous teaching service by the faculty. Vacations are granted as heretofore, with the difference that any quarter may be selected, subject to the approval of the management of the school; or, by continuous service, vacations may be accumulated to enable a teacher to secure a longer leave of absence. Additional teachers will be employed as assistants in the various departments who will be competent to take the classes of the absent teachers.

A proposed plan, which is favored by many, provides that each teacher may serve four consecutive quarters and take the fifth quarter for a vacation. This would bring each successive vacation of any teacher at a different season of the year.

Students are not expected to attend continuously, except by permission of the faculty. It is already found that they are not so averse to

stopping for rest when it is needed, since work may be resumed at the opening of the next quarter. Similarly, students are more willing to repeat work that has been imperfectly done than under the usual plan of classification, which imposes the penalty of a year's delay if the work of a single quarter is lost or repeated.

Under the usual plan, normal-school graduates are annually thrown upon the market in the month of June, just when the graded-school authorities are seeking teachers to fill vacancies for the following year, The natural result is that the supply is exhausted before the rural-school authorities are ready to act on the employment of teachers for the schools to begin later, in October or November. Hence, only the *undergraduate* supply is left for the rural-school service.

Under the Minnesota plan the classes graduating in September, December, and March will be available for rural-school service. Even tho this service shall be brief, because of the competition of the graded schools offering a longer year, more certain tenure of appointment, and higher wages, it will be a distinct gain to the rural schools, as well as to the teacher, if he is able to say: "My first teaching service after graduation was in a rural school."

The plan was presented to the Committee of Twelve on Rural Schools at its meeting in Chicago, and received its indorsement and approval in both the report of the general committee and of the Subcommittee on Supply of Teachers.

The 160 state normal schools of the United States, equipped with buildings and appliances at an expense of over $17,000,000, graduate about eight thousand teachers annually, which is a small proportion of the needed supply; and yet all of these buildings are closed during three months of the year. An additional expenditure of only about $600,000 would open every one of these 160 state normal schools for the additional three months of each year, and afford fifty thousand teachers annual vacation opportunities for professional study, in addition to all of the advantages of continuous sessions.

DISCUSSION

SUPERINTENDENT R. K. BUEHRLE, Lancaster, Pa.—Swayed chiefly by motives of economy, continuous sessions have been held at the Winona Normal School, and the experiment is reported a success. The utilization of the plant, the saving in the cost of fuel, and in the students' expenses, is very desirable, and, when regarded only from the financial side, the plan deserves commendation. It is also claimed as an advantage that continuous sessions would enable professors, if they prefer to do so, after several years' service, to obtain a vacation of an entire year at a time — an advantage over a few weeks, or

even months, every year — and that three or four graduating classes a year would enable the directors of rural schools to secure graduates as teachers for their schools, which they cannot do when there is but one class a year. Finally, it is suggested that, if successful, the holding of continuous sessions might extend itself into the schools generally to great economic advantage.

It is natural that this suggestion of change should emanate from the West, which is less restrained by precedent, where social custom and tradition are less strong than in the East, and where freedom and audacity consequently flourish. Yet efforts in this direction have been made at Harvard, where Professor Shaler reports that it was found necessary to increase the length and frequency of vacations.

It must be confessed at the outset that the simian motive is still too powerful in the educational field, and that imitation is never productive of the highest art, and that the challenging of that which is and requiring it to give a reason for its existence is, therefore, a hopeful sign of intellectual and moral life.

It is not expected of me that I should point out the advantages to be gained by these changes. That has been sufficiently attended to in the paper just read. It is expected of me rather to attempt to peer into the future, and from reason and experience to demonstrate the evils to be apprehended when the change has done its perfect work.

"Almost thou persuadest me" that these changes should be made at once in as many of our normal schools and higher institutions of learning as will best accommodate the teachers in actual service who desire to attend during their vacation. A short summer session — a special course of study adapted to the wants of practical teachers, both arranged, as far as possible, in such manner and under such conditions as will justify the graduation in due time of such vacation students — would seem to have much in their favor. Such changes would fulfill all economic requirements as regards utilizing the plant, without depriving the regular professors and students of their much-needed rest and recreation. It would not disturb the regular normal-school work, brought to its present state of excellence by long years of study and experiment.

But even thus the change is not wholly desirable, for it will most likely cause teachers to enter their profession with less preparation, in the hope and expectation of gradually adding to their literary qualifications in those summer schools, and it would seem that normal schools especially ought to regard it as incumbent on them to do all in their power to render this less possible. It also suggests too much mental application while teaching. There is a limit to mental exertion which should be borne in mind by none more than by the teacher, whose energies are severely taxed by his daily, mentally exhausting labors, and who, when true to his calling, gives away his life to perform his task; for all sympathetic action demands liberal expenditure of energy. From his inmost heart rises his God-given force, the sacred celestial life-essence, breathed into him by Almighty God; hence it is inevitable that exhausted nature will find relief in routine, and that the element of lively sympathy, on which the real value of the service depends, will be lost; and lassitude will be visible on the teacher's platform — all the greater because of the increasing preponderance of women in the profession, whose application to books, whose sympathy, is greater and more readily responsive, but whose energy is less, and less persistent. It is no reply to tell us that this has thus far not been experienced, for the experiment has not been in operation sufficiently long to manifest these effects. There is always a reserve force to meet special needs, but by and by this will also be expended, and then these effects will be very sure to make their appearance.

Even where summer schools have been most successful, as judged by the time of their continuance, as at Harvard and at Lake Chautauqua, they have provided largely for social intercourse, for open-air and experimental and lecture courses, and only sparingly for study from books; and the studies which made the greatest demand on the reason, as,

for instance, mathematics, were pursued by small classes, if at all. The fact is that too much importance has come to be attached to schools and books as creators of character. "Among the Greeks, to whom we are yet going to school in philosophy, in literature, and in art, the number of readers, even in the educated classes, was not large." "Men remembered and thought about what they heard." "Education is not the imparting of knowledge, but the teaching to think." It should be constantly remembered that one's calling is to serve him, and not he the calling; that work is a means, whose great end is the creation of character. Hence the man or the woman must not be lost sight of in the teacher. To him or to her, above many others, is the need of association with men conversant with the great affairs of the world imperative. Accustomed to command, to look down upon inferiors at least in intellect, the coming in contact with superior minds acts like a tonic. "The heroes of mankind are the mountains, the highlands of the moral world." "Surely if the worst of men were snatched into paradise for only half an hour, he would come back the better for it."

The sin of our age is haste; we live too fast — indeed, we pride ourselves most on our speed; no cathedrals consuming centuries in their completion for us. The study of mind which Socrates began with men, children finish with us; but behold the difference in the character of the work. Lack of moderation is characteristic of youth and the curse of America. Hence the department store, overwork, overtime, Sunday work, the strike, and the tramp culminating in the commonwealer. Not more work, but more workers, is the need of the hour.

Continuous sessions would make it very difficult to maintain our large, interesting, and inspiring educational meetings of teachers, now so generally held during the long summer vacations, and whose success is to a great extent due to the presence and active participation of normal-school principals and teachers.

Perhaps the chief consideration that still demands attention is the climate. Suppose, for the sake of the argument, that continuous sessions are a success in the serene atmosphere of the height of land, that would not prove that the same, or any, measure of success would crown a similar course in other parts of the country under less favorable, climatic conditions. All over the world physical circumstances control the human race. Isothermal lines modify the thinker and the thought. Our union is almost the size of Europe, where school laws and regulations recognize difference of climate in fixing the time of vacations. Must we not do the same here?

Moreover, with us this difference is intensified by the various components which enter into our population. We are all Americans, but we have not been able to lay aside the constitution derived from the fatherland with our allegiance to it. Hence, what may be salutary to the citizen of Minnesota, compounded of Scandinavian, German, and Englishman, will not be adapted to the citizen of Louisiana, boasting of French and Creole blood. The time of our vacations might, no doubt, profitably receive our serious consideration. Is the cold of winter the best time to keep our schools open? Should the older and the younger pupils attend during the same time of the year? Should the vacation occur at the same time of the year in the city and in the country? Should common schools be opened for men and women at certain seasons of the year, when little or no work is to be had, not only in the city, but also in the rural districts? Is there to be much of mediævalism surviving even as regards our vacations? Has the time as well as the duration been fixed by monks best acquainted with the sunny lands of Europe, and hence best adapted to that climate?

Finally, is a rearrangement of the course, so as to graduate four classes a year, economy? Will not the evils resulting from the disturbances and excitements of four commencements instead of one — small classes, lack of interest and regularity in entering and departing from the school — more than counterbalance the advantages promised

from the work of the few additional weeks of the previous vacations, even tho mental energy and vivacity remained unimpaired? Nor are continuous sessions at all necessary in order to supply graduates for the rural schools. There is another way of accomplishing this, namely: let the directors of these schools engage their teachers while yet in class, conditionally on their graduation. But I imagine — and the reader of the paper grants this — that the supply is not equal to the demand, and so the rural districts, less attractive financially and socially, cannot secure them. Now, increasing the number of classes will not necessarily increase the number of graduates. This will be done only when more persons enter and remain in the classes until they graduate, and they will do this when greater inducements are offered in the profession.

D. L. ELLIS, supervisor of public schools, Asheville, N. C.— There seems to be some confusion as to what is meant by "vacation schools," judging from the papers read by the distinguished gentlemen who preceded me. It is my purpose to discuss the topic as I understood it, i. e., the vacation school for teachers, and not for pupils of the public charge.

Here, in these states of the South, our needs are peculiar and urgent for some sort of training or culture schools for the better education of those who assume the great and momentous task of instructing our youth. This need will be apparent to you when I say that 90 per cent. of our teachers are scholastically, not to say pedagogically, ignorant.

To determine accurately the facts among my own teachers, numbering 150, I sent out recently an "information blank," and the result showed about ten of that number had received some sort of college or normal training; the others only the culture of the "old field schools." We ought not to wonder at this, in view of the fact that the statistics show that our average school year is only sixty-three days, and the average salary of teachers is only $23 per school month. What is true of this one county in North Carolina is approximately true of the whole rural system of all our southern states.

Now, the remedy for this woeful condition must be found in some sort of training schools, so located as to be accessible to the majority of those who teach, and of such length of term as shall make it possible for a regular course of study, in which these pupil-teachers shall do the work themselves, under expert supervision and direction. We have for a score of years wasted precious time and treasure on the so-called weekly county institutes, at which "windy" theories and impossible conditions were *talked* at the hungry victims of this stupidity, and the poor teachers went home either vague in their conceptions of the teacher's work, or else totally discouraged.

The "state normals" could not reach the teachers, for the expense of attending these widely separated schools precluded the possibility of many of the teachers attending them. Hence, I am frank to urge that the only solution of the question is to bring these schools to the teachers in the counties themselves. At least two of these schools, of two months' session, should be located in every county in the state, officered by the very best and most skillful women teachers to be had. I say women teachers, Mr. President, advisedly. Ninety-nine per cent. of the work of our rural schools is of the lowest primary sort; hence, logically, the training must lie along those subjects of primary schools, and only women are competent to do this work in its truest and best aspect. These schools must be located in the country, and not in the towns, where a low rate of board, not exceeding $5 per school month, can be secured. Let us remember that these teachers are miserably poor, and not able to pay for anything; yet there is no other equal number of men and women more courageous and heroic than these; they are worthy our best efforts to help them to a higher power, and, helping them, we shall raise all our children to that noble state of life which is the birthright of an intelligent citizenship.

BISHOP GOODSELL, of the Methodist Episcopal church.—Tho I entered the assembly without the slightest thought of making an address, I should have a colder

heart than I have if I were not moved by this opportunity, and a duller mind than I have if I were not stirred by what I heard here this morning. You will permit me, as a resident of Chattanooga, to add to the welcome you have already had, and to express my great pleasure that our city is honored by such a distinguished body of instructors. It has been a joy to me to meet among you some loving and loved friends and to renew acquaintance with some whom I knew in former days, but of whom my knowledge has, of late, been, as scientific men say, in a condition of "arrested development."

Referring to the subject under discussion, I wish to express my warm sympathy with those who have here advocated periods of rest for teachers and taught.

"He who worketh always,
Working without rest,
Never thinks his greatest;
Never does his best."

The Master whom I serve found it needful to go into a desert place to rest awhile. His human nature was refreshed by communing with that other nature, which as a God he had created. We, his children, have greater need of the same refreshing influence. The man who scaled "the iced mountain top, where birds dare not build nor insects' wing flit o'er the deathless granite," is a mightier and broader man for his climb. We must not forget that the greatest seers and the greatest poets have been men who chiefly breathed the country air. A city street is a limitation. From its pavement one sees but a narrow lane of God's stars; but a ribbon width of heaven's blue. The city poet is apt to sing pleasant ditties to "My Lady's Eyebrows." But the poet of the country, or at least he who refreshes himself with nature, sings of God's greatest forces and of his greatest works. He who cannot sing can yet feel; and he who feels little can yet absorb somewhat. It has been my lot to work in every state in this union, in every country in Europe, in Japan, China, Corea; but in no country have I found myself beyond the law of rest for inspiration. The emptied pond must have time to gather power for the wheel, else speech issues into vacuity and labor into senility.

Especially do these vacation periods stand related helpfully to you in your great service in assimilating our diverse peoples into one potent nationality. I salute you for the great part you have in this mighty, this difficult, but as yet successful task. More than forty years ago the poet Saxe perceived its weight where he catalogued the strains of blood which are woven into our national life:

English and Irish, French and Spanish,
German, Italian, Dutch and Danish,
Crossing their veins until they vanish
In one conglomeration!
So subtile a tangle of blood, indeed,
No heraldry-Harvey will ever succeed
In finding the circulation!

But all teachers, Christian and secular, are finding that circulation. The churches, the schools, all the appliances of our civilization, are doing great things in this great work. The proof is at hand; it is passing beyond prophecy into fact that a new people of special genius is now to be formed. You are helping form it. Under your deft fingers comes the plastic matter of young life. From this young life is to come the larger life under richer conditions of the republic. Our genius is not to be the genius of any one nation, like that of the Greeks for art, but a summary of the special genius of all the nations which contribute to our life — that genius you are to tutor. May you be enriched for your work.

GRADING AND PROMOTION WITH REFERENCE TO THE INDIVIDUAL NEEDS OF PUPILS

[REMARKS INTRODUCTORY TO FOLLOWING PAPERS]

BY PROFESSOR EDWARD R. SHAW, SCHOOL OF PEDAGOGY, NEW YORK UNIVERSITY

The subject before us for discussion this afternoon is not only an important one, but it is also a timely one, inasmuch as various attempts are being made in different parts of this country to advance pupils as fast as possible, instead of holding them for regular yearly and semi-yearly promotions.

This is not the first time that this problem has been before the Department of Superintendence. At its Boston meeting, in 1893, Superintendent Cogswell presented a most suggestive and commendable plan for the completion of the grammar-school course in three different periods of time and in four ways. At the meeting of the department at Cleveland, in 1895, another plan was presented. The presentation of plans here today will be much larger than the department has heretofore had the pleasure of listening to.

In all attempts at grading and promotion with reference to the individual needs of pupils there are certain conditions which must be reckoned with and which must, on no account, be lost sight of.

The problem must be considered from two points of view — the needs of pupils, on the one hand, and, on the other, the demands imposed by the course of study and the school system itself.

With reference to the needs of pupils, the superintendent must first take into consideration the different degrees of natural ability on the part of the pupils who compose the school. Secondly, he must consider the rapid and slow stages of mental growth that occur in nearly every pupil. The third factor in the problem, from the standpoint of the pupil, is the matter of the absence of pupils from school and some means of making up the time lost by such absence; this absence arising either from sickness, or from an embargo laid by the board of health upon homes and localities where infectious diseases have been prevalent.

With reference to the second point of view, the problem must be considered with reference to the demands of a proper course of study. The newer conception of what should constitute a course of study must not be sacrificed or violated in any scheme for the irregular promotion of pupils. It is not a difficult matter to move pupils on thru the grades at irregular intervals when the acquirement of so much book knowledge in

a formal way is all that is required. The problem becomes a much more serious and difficult one when constant provision is made for the thought side of education as above the formal side. The real test, then, of any plan of promotion with reference to the individual needs of pupils must lie in its power to satisfy our newer conception of the course of study and our newer ideas of teaching.

Considered with reference to the school system, the value of any such plan of grading and promotion depends upon whether that plan can be transmitted and carried out by a superintendent's successor. Unless this is possible, the plan will not satisfy. A system or plan of promotion that is a paternal one — in other words, one that has to be cared for from week to week according as exigencies may arise — is not a plan that will commend itself to the minds of progressive and yet conservative schoolmen. The problem, then, of grading and promotion to meet the individual needs of pupils is a large problem, and one that must be considered carefully and conservatively.

SOME NEW-ENGLAND PLANS AND CONCLUSIONS DRAWN FROM A STUDY OF GRADING AND PROMOTION

BY DR. JOHN T. PRINCE, AGENT MASSACHUSETTS BOARD OF EDUCATION

There is no question of school organization at present more important than that of a proper adjustment of conditions to the needs of individual pupils. The assumption upon which most courses of study seem to be based, that just so much ground must be gone over with equal thoroness by all pupils in the same time, is the greatest bane of our public-school system. The courses in use are probably intended to meet the needs and capacity of pupils of average ability. Such is the difference of ability, however, between the brightest third and the dullest third of almost every class of pupils that the work thus required is enfeebling to one part, while it is discouraging or unduly excessive to the other. To neither group is there the stimulus of success with effort. To one group there is success without effort; to the other there is effort without success. The difficulty, it is feared, is enhanced by the want of ability or inclination on the part of many teachers to adapt each lesson's requirements to the capacity of individual members of the class.

There are some signs of reaction against a system which encourages or permits a dead uniformity of ability and effort. The only fear is that the opposite extreme of individualism will be sought as a remedy. As between the practice by which forty or fifty pupils of all degrees of ability

are required to do the same work with nearly equal efficiency, and a return to individual teaching such as was carried on in ungraded schools forty years ago, there is but little choice, altho the ill effects of the two practices must be felt in widely different ways. But a choice between these extremes of practice ought not to be necessary. No more useful service can be rendered the public schools than that of devising ways by which the benefits of a class system of teaching will be secured, and at the same time such an adjustment of work be made as will permit pupils of varied abilities to do the most for themselves. To this task many educators have given much time and effort of late. Out of all the plans that have been devised there should be found some which can be readily adapted to any conditions that are likely to exist. It is evident that no one scheme will do for all. A classification which can be made in large schools should not be made in small ones, and a system of promotions that is feasible in small ungraded schools would be wholly inoperative in large graded ones.

In response to letters of inquiry to prominent school superintendents thruout the country, concerning plans of classification and promotion, over eighty replies have been received, from which the following facts and conclusions are gathered.

It is pleasant also to record the fact that in only four cities is the determining element for admission to the high school the superintendent's examination alone. The teachers' judgment alone generally determines the class in which the pupils of the primary schools are placed. Promotions from grade to grade in the grammar schools of about two-thirds of the places reported are based upon the combined judgment of the class teacher and that of the superintendent, or principal. In a few instances the examination by the superintendent, or principal, is made the determining element in all doubtful cases only, or cases in which the teacher is not able to decide.

The intervals between classes or grades, in about two-thirds of the cities and towns reporting, are one year. In the other third the intervals are one half year or less. In the report of the commissioner of education for 1890–91 returns from 465 cities and towns of over 4,000 inhabitants show the proportion of short intervals to be much greater than this. Several places report shorter intervals for the primary schools than for the grammar schools.

The methods of promotion will first be considered of those places in which the intervals between the classes are one year.

In about one-half of the cities and towns reporting, special provision is made for individual promotions or promotions out of course. Where no such provision is made, there are reported either few individual promotions or none at all. Quite a number of superintendents report that

the matter is left with teachers, with the request that pupils be promoted whenever they are qualified; but in such cases there is either no report of the number of individual promotions, or else the number of such promotions is so small that they may be said to be rare exceptions. A few superintendents seem opposed to double promotions, on the ground that some portion of the course is either done slightingly or else entirely omitted, or, as one superintendent says, "good pupils are spoiled by being advanced beyond their depth, merely because they are bright."

Where special provision is made for advancing pupils out of course, the widest difference of practice and of results is reported. In some cases the teachers are asked to report all pupils who by superior scholarship or by maturity are deserving of promotion out of course. A list of such pupils is kept by the principal or superintendent, and special facilities are afforded those who desire to be advanced. A few superintendents cause each grade to be divided into two sections, according to scholarship, thus enabling pupils to pass more easily from one grade to another during the year. In the primary schools the pupils of a single class or grade are sometimes divided into three sections or groups in the same way. In one city where the latter plan is followed a modified form of the monitorial system is followed, in which pupils from the highest grades often hear pupils of the lower grades in reading, either individually or in groups of two or three.

Several cities and a few towns report the opening of an ungraded school in each of the large graded-school buildings. In this school are placed backward pupils or pupils who cannot be readily classified in existing classes. Here, too, are pupils who are trying to get into a higher grade. The superintendents in their letters and reports speak in unqualified terms of the great good accomplished by the establishment of these ungraded schools. In some places the same end is reached by one or more assistants going from school to school in a building to assist backward pupils or pupils who are trying to get into an advanced division.

A number of superintendents whose schools have the one-year interval between the classes report a plan of dividing the classes into small sections in two or three essential subjects, and of permitting pupils who do especially well in those subjects to be pushed forward. Elizabeth, N. J., is a conspicuous example of this kind of classification.

Of other plans followed in schools having one-year intervals between the classes, a few will be given somewhat in detail.

The plan pursued in Cambridge, Mass., deals only with the grammar-school course, which is supposed to cover six years' time of pupils of average ability. A few weeks after the pupils enter the grammar school in September, they are separated into two divisions according to ability, one division called Grade A and the other division called fourth grade.

The pupils of Grade A move forward with the aim of completing the prescribed grammar-school course in four years, succeeding grades being called B, C, and D. The pupils of the fourth grade go forward more slowly, aiming to do each year only one-sixth of the work prescribed for the grammar school. The grades of these pupils in succeeding years are known as fifth, sixth, seventh, eighth, and ninth. At the beginning of the second year the pupils of what was Grade A, now called Grade B, go into a room with pupils of the sixth grade. During the first part of the year the pupils of the sixth grade are in advance of the pupils of Grade B, but, owing to the superior ability of the latter division, they all come together during the latter part of the year. At the beginning of the third year precisely the same conditions exist as existed at the beginning of the first year. The pupils of Grade C recite with the pupils of the seventh grade for a few weeks, when a readjustment is made, the abler pupils moving on at a pace sufficiently rapid to finish the course in two years, leaving the others to finish it in three years.

The fifth-grade pupils are alone in a room under one teacher, during an entire year. The same is true of the eighth-grade pupils. In all other rooms there are two grades or divisions, one belonging to the four-years' course and the other to the six-years' course.

A pupil who begins with the fourth grade and remains in the slower division to the end of the course will graduate in six years, unless he has to repeat. A pupil who begins with Grade A and remains in the more rapid division to the end of the course will graduate in four years. A pupil at the end of the sixth grade or of Grade B may go on with the slower or more rapid division and complete the course in five years. Thus it will be seen that the entire course of study may be finished in four, five, or six years, depending upon the strength or ability of the pupils, and all without the omission or repetition of any part of the course.

All promotions, both from the grammar to the high school and from grade to grade, are made by the class teachers, under the direction of the principal and superintendent. No preannounced examinations are given, but there are frequent written reviews given by the teacher, the results of which help to determine the fitness of the pupils to go forward. One feature of the plan which has helped it to succeed is that of the employment of a special teacher in each building whose business it is to assist pupils who are behind in their classes in any studies, or who are trying to get in an advanced class. This assistance, however, is no essential part of the plan. It may be used with advantage in carrying out any plan.

Of the 467 grammar-school graduates in the year 1896, 8 per cent. completed the course in four years, 33 per cent. in five years, 49 per cent. in six years, and 10 per cent. in seven or more years.

One good evidence of the benefits gained by the plan is the kind of work which is done by the pupils after leaving the grammar school. The record of pupils in all grades and courses of the high schools during the past three years shows that those who finished the grammar-school course in four and five years had a higher standing than those who took six or more years in finishing the course.

To the criticism that this plan of classification can be used only in large systems of schools, or in large buildings, it may be said that in one of the Cambridge schools, where the plan is in full and successful operation, there are only 330 pupils, distributed in six rooms, one room having eighty pupils, with two teachers. Of the present graduating class, numbering fifty pupils, four will probably have completed the nine-years' course in six years at the time of graduation, twelve in seven years, sixteen in eight years, fifteen in nine years, and three in ten years.

Added testimony to the adaptation of this plan to a small system of schools is found in Middleboro, Mass., whose enrollment of pupils is about 1,100, the enrollment in the three buildings where the plan is in operation being 474, with eleven teachers. Of the present graduating class, numbering fifty, about fifteen will complete the course in one year less than the prescribed time.

In Woburn, Mass., a plan of "double promotions" has been in operation for some years, and has been attended with good results. In the primary schools the interval between classes is made short by dividing the pupils into small sections. As there are three or more sections in each room, the class intervals are so short as to permit frequent changes, the section rather than the grade being the unit of promotion. The nominal time for the completion of the primary-school course is three years, but many complete it in much less time. In each of the grammar grades the essential features of the entire work prescribed for the year are taken during the first half year, and those pupils who have successfully performed the work, especially in language and arithmetic, at the end of the half year, are promoted to the next higher grade. During the second half year a more minute study of the topics in language and arithmetic already pursued is made, by which an opportunity is afforded for new pupils to do the work of the grade, and for those who have done it imperfectly, to review it. By this plan bright pupils are given the opportunity of passing thru two grades in one year. The number of pupils who won mid-year promotions last year in the grammar grades was 129, of whom 104 received a second promotion at the end of the year. The number of mid-year promotions in 1895 in the same grades was 315. Of this number all but seventy-eight were again promoted at the end of the year. The present total enrollment in the ninth grade is 145; of these three have completed the nine-years' course in six years, ten in

seven years, thirty-three in eight years, and ninety-nine in nine or ten years.

In Keene, N. H., a plan has been in operation for three years which embodies some features of plans already described. Its resemblance to the Cambridge plan consists in the division of two grades into A and B sections, one of which goes forward at a more rapid pace than the other, with opportunity for pupils to cover a six-years' course in four or five years. Its plan of reviews at stated times for the convenience of those who omit some portions of the work, as well as for those who need more drill in the subjects reviewed, resembles in some respects one of the essential features of the Woburn plan. In the Keene plan, the A or advancing divisions do not work ahead in all subjects, but only in those subjects in which consecutive work is necessary, as grammar and arithmetic —thereby resembling in one important respect the plans followed in Elizabeth and Woburn. There are other features of the Keene plan which are unique and show the value of skillful planning and careful oversight. There are ten grades below the high school. Of 1,056 pupils belonging last year, forty-eight special promotions were made during the year. In the present graduating class of sixty four in the grammar school, fourteen will have completed the course in nine years, four in eight years, and one in seven years.

The reports of plans of promotions in schools having short intervals between the classes are almost as varied as those already referred to. In nearly all of these schools the reported number of double promotions during the past year far exceeds the number reported from schools where class intervals are one year in length. The percentage of such promotions, based upon the number of pupils enrolled, ranges from 3 to 30 per cent. In a majority of this class of schools there are twenty-week intervals between the classes, regular promotions being made twice a year. When two sections twenty weeks apart recite in one room to the same teacher, transfers from the lower to the higher division are said to be comparatively easy to make. Sometimes the classes, especially when they are large, are separated into two or more divisions, making the intervals between the divisions only ten or twelve weeks. This arrangement is not unlike that which is made in several cities and towns, by which all the pupils are divided into small sections according to attainments, with provision for promotions at the end of eight, ten, or twelve weeks. There are some differences in the details of plans followed, but, in general, the principle recognized is the same, which is to make as short intervals between the classes as possible, with frequent promotions. This principle was applied in the classification of the elementary schools of St. Louis, twenty-five years ago, under the direction of Dr. Harris, now commissioner of education.[1]

[1] See report of the St. Louis school board for 1871–72.

Of the cities in this country which have adopted this plan, in whole or in part, Dayton, O., may be mentioned as a conspicuous example. Of the plan in Dayton, Superintendent White writes:

The aim is to have from thirty to thirty-five pupils in each room. The work is assigned for the year by grades. The pupils of each grade are assigned to rooms, as before stated, commencing with the one having the highest standing, and so on down to the end. In districts where there are several rooms of the same grade it makes classification very close and enables the teacher to present the work to each class in such a manner as to be within the comprehension of each individual child. Each of these rooms is again divided into two classes, according to standing, and the work is presented to the two groups separately. When the work for the ensuing year is completed, the pupils of any group, or any particular pupil in the group, may be advanced to the next higher grade at any time within the year.

It is asserted by some that this plan is only adapted to the schools of large cities, or to schools of large size. Two cities of small size report that they are following the plan essentially with success — Le Mars, Ia., and Centralia, Ill. Of the work in Le Mars, Superintendent Coleman writes:

Our class intervals are short. In the primaries they are from six to eight weeks, in the grammar grades from eight to twelve. At intervals varying somewhat, each class is reviewed back to the next lower class; but all pupils *very* strong in the work, as indicated by the recommendation of the teacher, are excused from said review, and are promoted to the class that reviews to meet them. Our rate of progress between these reviews is determined largely by the ability of the stronger members of the class, as we expect the others to review soon. This is our sixth year on this plan, and we find an increasingly large number of pupils ready for the promotions.

We have admitted three classes into our high school this year — one in September, one the first of November, and one in December. There are forty-nine pupils in these three classes; five of them took ten years to complete their preparation for the high school; five took nine years; eight took eight years; thirteen took seven years; fifteen took six years; two took five years; and one took four years.

In the Centralia schools, 425 pupils of 1,374 — the whole number belonging—were promoted out of course last year, or over 30 per cent. Of the plan pursued Superintendent Mather says:

Our system of promotion has to do largely with the individual pupil. Each grade is divided into A and B sections. No grade in the system is more than six weeks, or seven, beyond the next lower. When a pupil, in the judgment of the teachers, is able to do the work of the grade beyond, he is promoted to it. With my strong teachers — those of good judgment—I permit the recommendation to take the place of an examination. Every month and many times every week pupils are promoted. By keeping the grades thus far apart, the school is not disorganized and sufficient encouragement is given to all pupils.

Thus far I have given, somewhat in detail, the plans of grading and promotion culled from letters and reports which are in actual operation in this country. They express in forcible terms the feeling of opposition quite generally felt in progressive centers to the lockstep marching by platoons from grade to grade, which still characterizes the practice of grading and promotions in many schools of both hemispheres.

In all the examples given there is doubtless much that is good. It is evident, owing to varied circumstances, that no one plan is suited to all places; and yet it is possible to select certain common elements of excellence and from them derive some principles of value to all who are seeking to solve the difficult problem of making such grading and promotions as will give individual pupils the largest measure of opportunity. To these principles I will add some conclusions of my own, based upon experience and observation, and upon opinions from trustworthy sources.

1. As to length of intervals between the classes, it is significant that, altho in my recent inquiry only about one-third of the places reported shorter intervals than one year, and in the investigation made by Commissioner Harris in 1893 the proportion of places having short intervals was but a little greater, the opinions of superintendents, as shown in the latter investigation, very generally favored the shorter interval; only sixty-five out of 425 reporting as being in favor of the one-year interval. I place, therefore, first among the principles of grading the making of as short intervals between the classes as circumstances will permit. In a collection of children numbering one hundred or more the gradation should be of such a kind as to permit intervals of one-half year or less in at least two branches of study, and where the number of children is more than two hundred, such intervals may profitably exist in nearly all the required studies. Where the numbers warrant it, as in buildings having four hundred or more pupils, the intervals should be nine or ten weeks in all subjects, and may be less than that in some subjects. Where the number of pupils covering the entire course must be placed under the charge of two teachers, their distribution will depend upon circumstances, such as the relative number of advanced pupils, number of beginners, etc. But generally it may be said that a little more than half of the work usually assigned to the course should be given to the primary teacher and the rest to the grammar-school teacher. An arrangement of classes in both rooms should be made by which the intervals are less than one year between classes in sequential subjects, like reading and number in the lower grades, and arithmetic and grammar in the upper grades. With such classification pupils should be permitted to recite in advanced division in any one or two subjects, whenever they show ability to do the work of that division, with a view of working up into a higher grade in all subjects.

2. Where the work of one teacher must cover the entire course, close gradation in all subjects should be avoided. The pupils may be heard together, or in two or three divisions, in all subjects whose parts are not closely dependent, like language, nature study, geography, history, and literature. In other subjects, as arithmetic and grammar, and some parts of reading, the school should be divided into four or more divisions.

Pupils should be permitted to recite in any division or in any subject in which they can do the most for themselves, and be permitted to pass from one division to another whenever they show that it is for their advantage to do so. The more advanced divisions in some subjects may be heard two or three times a week, with correspondingly long lessons assigned if they are full-time subjects. The number of daily recitations in rural schools will depend upon circumstances, but should not exceed twenty.

3. The course of studies as far as possible should be made so as to assist the teacher in adapting the work assigned and called for to the abilities of all pupils in every class. This can be done by designating important or principal features which must be taken by all for a proper understanding of the subjects, and by suggesting supplementary work that may be done profitably by pupils after they have acquired the necessary portions, and while they are waiting for others who have not acquired them.

4. Regular times of grade or class promotions are desirable, with special arrangements for the promotion of individual pupils, or of sections of pupils, whenever they show their ability to perform the work of a subsequent grade. A specific plan for irregular as well as for regular promotions should be made and carried out by the principal or superintendent. As a rule, merely general directions or a reliance upon the judgment of the teacher to promote pupils out of course is not sufficient to meet the requirements of all cases.

5. "Double promotions," where the intervals between the classes are one year or more, and where there is no arrangement by which the work in sequential subjects of all grades is covered, may be a benefit to some pupils in the saving of time, but are likely to be attended with dangers that do not offset the benefit gained. If the course of studies is what it should be, there is in "skipping" a portion of the work a loss which cannot be easily made up.

6. Pupils should not be heard in recitation together in all subjects, but should be separated into two or more divisions, one division of pupils being given an opportunity for study while others are reciting. In some exercises, all the pupils of a grade may recite together, as in penmanship, and some kinds of language and nature study, in the lower grades, and in some forms of written and oral reviews in the upper grades. In some subjects, like arithmetic and grammar, at least three divisions of a class may with profit be made. In large buildings the divisions may be distributed in the rooms on the basis of those subjects in which the shorter interval is made; that is, two or three divisions in arithmetic, constituting one class or grade, may be placed together in one room.

7. Promotions from grade to grade should not depend upon examinations made by a person other than a class teacher. In general, the class teacher should determine the promotion or non-promotion of all pupils

whose ability or non-ability to perform the work of the subsequent grade is unquestioned by her. The place of all other pupils should be determined by the principal or superintendent, by means of examinations and such other evidence of their ability as is attainable.

8. Provision should be made in the course of studies for reviews at such times and in such subjects as will permit rapidly advancing pupils to lose no part of the work outlined in the course.

9. Whenever it can be done, the help of one or more assistant teachers should be secured, whose special work will be to give assistance to backward pupils, or to pupils who are endeavoring to work up into a higher division or grade.

10. For the purpose of knowing the characteristics and needs of individual pupils, a teacher should be in charge of the same class of pupils for at least one year. In some cases where pupils are promoted out of course from one room to another, the time of such pupils with one teacher might be less than a year.

11. Altho the number of pupils to a teacher has not been a special object of inquiry in this investigation, it has been brought out incidentally that attention to the needs of individual pupils demands that in no case should there be more than forty pupils to a teacher, and that, where the ages and attainments of pupils are widely different, as in so-called ungraded schools, no teacher should have more than twenty-five pupils.

DISCUSSION

W. S. SUTTON, professor of pedagogy, University of Texas.— In the problems relating to the grading and the promotion of pupils the whole field of education is involved. In this discussion will be given only a brief statement concerning each of the conclusions reached by Dr. Prince.

Concerning his first conclusion, that the intervals between classes should be shortened, there can be no disagreement. Where the interval is one year, there is little opportunity for the bright pupils to exercise their ability to make greater progress than that which is made by those of only ordinary capacity. It is next to impossible for a pupil, without injury to himself, to skip a whole year's work, or in hours outside of school and during vacation to do the work of a whole year as it should be done. The undertaking is one of such magnitude that but few have the courage to make the attempt. The consequence is that in any system of schools where regular promotions are made but once a year the pupils that complete the course of study in less than the time regularly prescribed is very small indeed.

One must commend Dr. Prince's suggestions, that, when the pupils in all the grades or classes must be placed under the charge of two teachers, little more than half of the grades should be given to the primary teacher; that the arrangement of classes taught by both teachers should be so made that the intervals between classes in sequential subjects like reading, arithmetic, and grammar shall be less than one year; and that pupils be

permitted to recite in higher divisions than those to which they regularly belong, in case they show ability to do the work of the higher divisions. I see no objection to the use of this same principle in city schools, for that matter. According to the Cambridge plan, this policy is used with excellent effect so far as the pupils of the sixth and seventh grades are concerned. This plan, if good for the pupils of the sixth grade, should be extended to pupils of other grades.

Dr. Prince's suggestion in regard to grading and promotion in the rural schools is in harmony with the report of the Committee of Twelve, in that he says: "In the rural school having only one teacher, close gradation is to be avoided." Whenever the circumstances in a rural school are not favorable for grading it, to grade that school is to commit a most grievous fault.

Second: "The course of study," says Dr. Prince, "should be made to assist the teacher in adapting the work assigned and called for to the abilities of all pupils in every class." He says that this can be done by designating important features of the work, and by suggesting supplementary work for the brighter pupils. In my opinion, a course of study should not be arranged for bright pupils or for dull pupils, but it should be arranged for all pupils. It is not advisable that, in a single class, only the mediocre pupils or the dullards, or pupils of exceptional capacity, be found. Ideal conditions obtain when pupils of varying degrees of intellectual quickness are classified together. The dull pupil is inspired more certainly and more effectually by the effort of his more favored fellow-pupil than he is by the encouragement or compulsion of his teacher. He sees his classmate performing easily and beautifully the work assigned, and he himself determines that what his classmate does he himself ought to do, and he can do, and he will do. But the bright boy can be of great service to others and at the same time serve himself. In his daily work he can be brought to teach his slower companions; and he who teaches a fact, or truth, or subject, reaches a better understanding of it. The bright pupil, by observing the struggle of a duller mind to reach the truth, gains an insight into human nature. He learns by practical experience how difficult it is for man to apprehend and comprehend the truth. He learns that one of the great functions of the intellectually strong is to teach the intellectually weak, and to be patient during the process.

Third: I commend especially the suggestion that, in addition to regular promotions, there be a specified plan for making promotions at any time. I suggest that test questions, questions which deal with the application of general truths, questions that call for independent and, to some extent, original thought, be occasionally given to the teacher by the superintendent or the principal, with the instruction that especial attention be given to those pupils whose answers may be satisfactory.

Fourth: I agree with Dr. Prince in the statement that "Double promotions are likely to be attended with dangers that do not offset the benefits gained," and that, "If the course of study is what it should be, skipping a portion of the work is done at a loss." If a course of study is really well planned, if a close sequence of topics in the several subjects and a close sequence of subjects obtain from beginning to end, skippers are not to be encouraged. The schools of America in a determined manner should set their influence against haste in education.

Fifth: The separation of pupils into two or more divisions I have already anticipated.

Sixth: "The promotions from grade to grade should not depend upon one or more examinations by a person other than the class teacher," says Dr. Prince. I should be glad to see him go a step farther, and say that promotions should not depend upon one or more formal examinations held by anybody. If the teacher is not able at the end of a year of hand-to-hand struggle, as it were, to make an intelligent decision as to the intellectual strength of her pupils, it is extremely doubtful if she herself, or a superintendent, or a principal, can decide the matter by the single round of a written examination.

Dr. Prince's seventh conclusion is that provision should be made in the course of study for reviews, at such times and such places as will permit rapidly advancing pupils to lose no part of the work outlined in the course. I take it that he intends that these reviews shall be of an educative character; that they shall not be mere repetition for the sake of repetition.

Reviews should, at times at least, be written. It is astonishing how fluently the majority of people can talk about all subjects, and yet how little they can write well upon any subject. It is almost alarming to discover how little one knows about pedagogy when he attempts to put it down in cold black-and-white. Writing not only makes one state his thoughts exactly, but it also breeds conciseness of style — a virtue too little known in conversation or in the oral recitation. I believe there should be a period every day when a written lesson should be given. During this period neither teacher nor pupil should utter a single sentence. Silence, the soil out of which thought grows, has an educative value the modern schoolmaster too frequently neglects.

Dr. Prince's eighth conclusion is that, wherever it can be done, the help of one or more assistant teachers shall be secured. It occurs to me that these assistant teachers, while in many instances they would be of great service, are not really necessary when the regular teacher has not more than forty pupils under his instruction, and when the intervals between the grades are not longer than three or four months.

Dr. Prince's ninth conclusion is one to which I heartily subscribe. Every teacher should have under his control a class of pupils for at least one year. If boys and girls were to change mothers as often as they change teachers, I am persuaded that, while it would often result in much relief to the several mothers, the children themselves would evidence lamentable results from the rapid rotation of the maternal office.

The last conclusion stated by Dr. Prince, that a teacher should not have more than forty pupils, all schoolmasters approve. Yet this fact should be continually presented to school boards, and the question should continue to be agitated until it is settled properly.

In closing this discussion, I wish to state three cautions which have already been incidentally mentioned.

1. In any plan seeking to provide for the rapid promotion of bright pupils, great care should be exercised to prevent them from galloping thru the grades.

2. In encouraging rapid and irregular promotions of the bright pupils there is danger that the instruction of the teacher will hit the course of study in the high places only.

3. It is well not to sacrifice the individual in order to serve the general good; but it is better not to sacrifice the general good for the sake of the individual. The ideal school is one in which the good of the great majority and the good of the individual are both subserved.

GRADING AND PROMOTION WITH REFERENCE TO THE INDIVIDUAL NEEDS OF PUPILS

PLAN OF THE NORTH-SIDE SCHOOLS OF DENVER

BY JAMES H. VAN SICKLE, DENVER, COLO.

Local conditions cannot be ignored in a scheme of promotion.

Conditions affecting the problem in my district are as follows: Large, centrally located buildings, enrolling eight grades; buildings of four

to six rooms tributary to the large buildings for the convenience of small children for whom the long walk would be a hardship.

The Chicago plan (each building a law unto itself in the matter of promotions) could not be applied where such an interdependence exists all along from third to sixth grade. The Cambridge double track, or long-and-short-course plan, would unduly complicate the machinery. The separation of a class into small, independent groups with separate lessons involves a loss in the scattering of the teacher's effort for which the rapid movement of the strongest group is no adequate compensation.

Our circumstances permit promotion in lower primary grades without regard to fixed dates, but about the third grade we find it best to work *toward* fixed dates. The half-year interval between classes has proved most serviceable after the fourth grade. We admit two classes to the high school each year. As far as possible, adjustments needed between September and June are made within the room, so that a change of teacher may not be necessitated. The classes or divisions in a room vary in number and relative size. They change in both these respects from time to time according to circumstances.

It will be seen that this plan, so far, is practically the plan recommended in Circular of Information No. 7, published by the Bureau of Education in 1891.

After an exhaustive discussion of the class intervals used in seventy cities, we find on p. 20 of this circular this statement: "Of the three class intervals above considered (the year, the half year, and the term or quarter), the half year seems to possess the most advantages and the fewest objections, and this is specially true in grades below the high school, possibly excepting the first and second grades, where a shorter interval may be desirable. This interval is sufficiently short to permit needed promotions of individual pupils, and it is sufficiently long to prevent a too frequent readjustment of classes and class work."

This plan is easily understood and easily administered, and therefore likely to be handled by the average school principal with greater effectiveness than a more complicated one. A class interval so long as to prevent frequent reclassifications and irregular promotions and brief reviews is not now generally defended.

My contention is that the short and varying interval in the primary grades, with the half-year interval in the grades above, is a sufficient development of the mechanism of gradation to safeguard individual interests, so far as any mechanism can safeguard them; that, instead of introducing further complications into the machinery of school organization, we shall find a more hopeful field for effort in devising plans for greater flexibility in *class* management, especially in the grammar grades.

Even if the members of a class could have at a given time equal knowledge, which is impossible, they would still differ greatly in quickness of comprehension and in working power. This would be equally true of a class of fifteen and of a class of fifty. These differences would

manifest themselves in varying degrees according to the changing order of studies during the day. The child who is strong in arithmetic may show less strength in language, while another good in both may need more time in geography or history, and so on in infinite variety; while the average strength of the individuals composing the class may not vary greatly. No matter how carefully we grade, we find these differences.

A recitation, as ordinarily conducted, attempts to secure the attention of all individuals in the reciting class during the entire twenty or thirty or forty minutes assigned to it on the program. All members of the class attend to the same thing at the same time; tho often badly mated in point of speed, they must move at the same pace; the quick wait patiently for the slow; if the pace is rapid enough to keep up the keen edge of interest in the quick, the slow are fairly dragged over the ground; so a compromise is arranged which fits neither. At the first subtle signs of lessening interest the teacher redoubles her exertions in order to chain the wandering eye and check the budding yawn. If she is a teacher of ability, she generally succeeds in this, but at too great a cost in vital force, for the energy put forth by the teacher is out of all proportion to that put forth by the pupils. The pupils are kept in motion too much by the will power of the teacher; the force is external and temporary, rather than internal and permanent; it tends to produce fitful and spasmodic effort. The pupils attend out of respect for the teacher, and from a desire to conform rather than from any feeling of need. Those naturally quick easily become satisfied with an effort far less than their best. Their time might be employed to better advantage than in listening to repetitions of what they already understand, or in spending thirty minutes on what they might do in twenty. Such management makes dawdlers.

The individual plan does not offer an altogether satisfactory remedy, even in schools with a smaller assignment of pupils to a teacher than is possible with us. Is it not possible to retain the manifest advantages of the class recitation so often set forth by Dr. Harris, and yet, as the recitation progresses, allow individuals to drop out and do other work more profitable than simply maintaining the semblance of attention?

Feeling that we ought not to put a premium upon the mere act of sitting thru a recitation, I have watched with some care for the past three years an experiment in this direction tried in two of our larger buildings. It is an effort to do in a systematic way what a few good teachers here and there have done occasionally. It is, therefore, not an invention, but an adaptation. Some of the purposes kept clearly in view are these: to secure better use of time; to fit each pupil to rely upon his own judgment by often allowing him to share with the teacher the

responsibility of deciding what he had better do at a given time; to secure, by means of this individual responsibility, willing effort even on the less agreeable studies, thus keeping the pupil fairly even in his work; to secure more study time in school, where conditions favor concentration, and thus to do away with the necessity of "keeping after school" (staying after school is quite a different matter); to enable a pupil to demonstrate his fitness for special promotion; to secure conditions favorable to enthusiasm in the pursuit of efficiency and knowledge by emphasizing these as ends, instead of placing emphasis upon marks, special seats, or rewards of any kind. The central thought is *individual responsibility*.

While no two teachers work in exactly the same manner, the plan followed may be stated in a general way as follows: All pupils are held for definite minimum requirements. (In order to afford facilities for greater attainment, each room is provided with its sets of supplementary books and a carefully selected reference library of from fifty to seventy-five volumes.) While those pupils for whom the minimum requirement in a given subject is sufficient are mastering a given assignment in that subject, others capable of doing more, tho not yet strong enough in all studies to be able to skip a half year, are, by a process of natural selection, detaching themselves temporarily from the class in order to work on some study in which they are weak, or for broader or deeper study of the topic by means of the reference books, gathering illustrative material, or following out some line of interest approved by the teacher. Those excused may at any time be required to rejoin the recitation to give needed help to others. They are thus continually held responsible for the work in hand. Failure to respond satisfactorily at any time, either in advance or review, is understood to be evidence that the pupil in question had not attained that degree of proficiency which would warrant diverting his attention from the minimum requirement from which he had been temporarily released, and his release is canceled. A few experiences of this kind improve his judgment and make him cautious. He strives to make his acquisitions permanent, not merely for the day. He had better make mistakes early in his estimate of himself, and correct them, than to be acting so wholly under prescription that there is no chance for a mistake in this respect. Without this opportunity for self-measurement there is danger that some will develop vanity and conceit, and others excessive timidity, rather than self-respect and confidence. The pupil is in the truest sense educated thru occasions for choice.

A pupil may at a given time find the work in arithmetic and geography all that he can do, while at the same time he is making fuller study, than some of the rest, of a period in history. This he considers a privilege which he works energetically to secure. Another, not so able in history, may get this liberty in some other subject. There will come a time when

he may give to the class the benefit of his skill or of his research; thus he has an immediate motive, partly selfish, but not wholly so. He is giving to others. His success awakens a desire in others to be able to make creditable contributions of the same kind; thus all are stimulated to do independent work in spare moments and to find spare moments for independent work. They learn how to find things in books. This is perhaps the most useful single accomplishment that we can cultivate in a child. Books must always be his chief reliance after leaving school.

In a class fairly well graded each pupil will have some study from which it will be safe to release him partially now and then. Thus all get some encouragement from the plan. It secures energetic work without stimulating a hothouse growth. The motive it holds out is a permanent motive and a worthy one.

It is not a plan for hurrying pupils thru the grades. This class presents an even front when entering upon a new division or lesson unit of any study. The development work is done with the whole class. One goes no faster than another, but he *gets* more. One describes a larger circle than another, or, to use an agricultural expression, cuts a wider swath. It is not so much to the pupil's advantage to go thru the grades rapidly as to get all that he is capable of getting while he is going thru.

The plan tends to even up the pupil in the various studies, since making pleasant excursions in favorite studies is conditioned upon fair attainment in all studies.

It secures for the pupil so much additional study time in school that much less work needs to be carried home, and thus it helps to do away with the idea, prevalent in many homes, that the parents are expected to do the teaching, and that the only duty assumed by the teacher is to check up the work and pass judgment upon its quality.

It allows the teacher to devote time to the less able pupils without robbing the others. The less the brighter pupils depend upon the teacher, the better. The aim should be, as rapidly as possible, to make all pupils self-reliant.

It affords opportunity for the development of latent strength, and gives the teacher a safe basis for determining the fitness of individuals for working with the division a half year in advance. We find that the child irregularly promoted invariably makes an enviable record in the higher class. One hundred and forty-two such promotions have been made in our schools since September last, or 4½ per cent. of all promotions. Five and three-tenths per cent. of all pupils now in the grammar grades are where they are by special promotion.

In the eighth-grade class this year, four have finished, or will have finished, the eight-year course in less than six years, seven in six and one-half years, twenty-one in seven years, and twenty-four in seven and

one-half years. Able pupils are not kept marking time, but are advanced whenever they show the requisite strength. The half-year interval does not prevent this. The year interval would add materially to the difficulty.

In the two buildings in which this plan of class management has been systematically tried there has been apparently greater attention to individual needs than in the other buildings. One hundred and sixty-one pupils finish the work of the eighth grade this year in three buildings. In one building, 57½ per cent. finish in eight years or less; in another, 62½ per cent.; and in the third, the one pursuing the ordinary plan, only 37½ per cent.

I do not mention any of these figures as showing progress at all remarkable, for, by force of circumstances, in all three of these buildings the school day is cut short for all first-year pupils, each child attending but one half day. Thus a reasonable allowance would be eight and one-half years to complete the course. The figures seem to indicate, however, that in two buildings the plans are more favorable to individual advancement than those used in the third, since I know of no other conditions affecting one school more favorably than another, such as strength of teaching force, nature of the population, etc.

It is not denied that this plan requires more thought and broader preparation on the part of the teacher than the ordinary class plan. But a teacher whose attention is thus directed constantly toward individual needs inevitably gains so much in skill that after a time, all things considered, the work seems easier than before. There is ample compensation for the energy spent in planning work for those temporarily excused from recitation. These are the active spirits who ordinarily find means to divert themselves at the expense of the good order of the room. Kept fully occupied with self-imposed tasks, they cease to be a disturbing factor. The spirit of the room soon comes to be one of self-control and industry. Repression is no longer needed — only direction. A difficult pupil, new to the plan, soon learns that he cannot afford to go counter to public opinion. It is not the teacher, but the spirit of the room, that causes him to settle down to earnest work.

Teachers are hampered by their own training. They have not been accustomed as pupils to any freedom in these directions; hence it does not occur to them that it is possible to give their pupils any freedom. They have little faith in the ability of the pupil to use wisely any freedom.

If, as we glance into a schoolroom, it seems to be in perfect order, every child looking at his book, no one whispering, faces all to the front, teacher's desk and pupils' desks models of neatness, we are pleasantly impressed, and we are inclined to say to ourselves: "That is a good

school." Whether it is a good school or not depends upon how these appearances are secured. If veery choice of occupation and every movement are dictated by the teacher, the school is a very poor school. The pupils must necessarily grow less and less self-reliant.

Unfortunately, we superintendents, by commending these surface indications, and pronouncing those schools good which have them and little else, have encouraged a vast amount of formalism that absolutely prevents freedom to do the best thing possible for the individual. We thus oblige teachers to cultivate that whole brood of artificial incentives so common everywhere, instead of natural and worthy ones.

In the evolution of our schools, those teachers who most carefully observed these outwards forms were counted most successful; they were, therefore, most in demand, and hence the type has persisted. Most of us, and most of the teachers associated with us, have been brought up under the system; hence it is hard to break away from it. It is so easy to measure a teacher by this standard, so hard to take less tangible things into account.

I regard it important that the class interval used in the grammar grades shall be used at least in the earlier years of the high-school course. If the grammar-grade interval is one-half year, and yet pupils are admitted to the high school only in September, a large number must be held back at a time when it is very important that they should move forward. A larger number of those promoted in January enter the high school than of those promoted in June. They leave the eighth grade on Friday, and begin the work of the ninth on the following Monday. No long vacation, with its many opportunities for a change of purpose, intervenes. Ninety-five per cent. of those promoted last month at once took up the high-school work. Only 80 per cent. of those promoted last June registered in the high school in September. We find the plan no more expensive than the plan of annual admission, since the classes are so large as to require division. Fewer pupils drop out thru discouragement, since failure in any study means only a reasonable review of that one study.

Besides carrying the half-year interval thru the twelve grades, we attempt to care for the interests of the individual in the high school by making a large number of studies optional. Any pupil not a candidate for graduation may study any subject which the daily program will permit. All pupils, to quite an extent, make their own courses. Certain studies are required of all pupils alike if they wish the diploma of the school. Aside from this list, which is relatively small, pupils may choose, with the advice of parents and teachers, those studies which appear best suited to their several needs.

Fixed courses, in which all must do the same amount of work in the

same time, do not take account of differences in mental and physical strength. Those who can carry all of the work stay in school; others, becoming discouraged, drop out. We aim to provide for all: "the mentally strong and the mentally weak, the physically strong and the physically weak, the permanent and the transient." Those who cannot carry four studies may take three; those who cannot carry three may, without the slightest loss of self-respect, limit themselves to two.

The official course of study is an inventory of the studies authorized to be taught, with a statement of the aims of the school, suggestions as to the amount of work a pupil should undertake, the subjects characteristic of certain courses, the proper grouping of studies, etc.

At the close of each half year each pupil receives a certificate showing the studies successfully pursued and the number of periods per week devoted to each. When he gets enough of these certificates to show that the official requirements have been met, he receives the diploma of the school, which bears on its face a record of the subjects pursued and the time devoted to each.

Each pupil may work according to his strength by choosing just the number of studies that his physical and mental ability permits. He may take as long a time to earn his diploma as he needs—five years if necessary; or, if possessed of sufficient physical and mental vigor, he may earn it in three and one-half or three years.

The aim of the pupil's effort is the mastery of distinct subjects of study rather than the maintenance of a general average. The pupil does his work more enthusiastically since the studies are largely of his own choosing. His course may not differ materially from one that would be chosen for him by his teachers, but it makes a vital difference in the spirit with which he undertakes it whether he loads himself with work or is loaded by another.

The plan has been in operation in our school for three years. We have noted that the pupils do more work and better work than formerly. More pupils remain in school to complete a course. The development of natural talent is encouraged. Of 102 graduates (three classes) no two have pursued exactly identical courses.

RECAPITULATION

A class interval less than a half year is desirable in the lower grades.

The class interval may be longer as the pupils become older and able to work more independently.

In the grammar grades and in the high school the half-year interval is satisfactory.

As the mechanism grows more rigid, owing to the necessity of con-

solidating classes at fixed dates, freedom to make class management flexible steps in to the rescue of the individual.

The pupil is educated by a gradual increase of responsibility, and the accompanying necessity of choice, till finally a most important choice, that of his high-school course, is intrusted to him in part.

THE ELIZABETH PLAN OF GRADING

BY WILLIAM J. SHEARER, SUPERINTENDENT OF SCHOOLS, ELIZABETH, N. J.

Of the many difficult problems which confront those who are responsible for the organization and administration of the schools, no other one is more perplexing than this one of grading. No other one affects more vitally the present and future welfare of the pupils in the schools. No other one is of such interest to the parents who are solicitous for the progress of their children. No other one is of more immediate interest to the principals and teachers who have been compelled to work under the present mediæval plan, which has long since outlived its usefulness. No other one is such a source of worriment to conscientious superintendents who realize that the system of grading, which was intended faithfully to serve the children, has become their tyrannical master.

All must admit that teachers vary greatly in knowledge, power, skill, and many other ways affecting their efficiency. None dare deny that the children of every grade differ widely in age, in acquirements, in aptitude, in physical endurance, in power of attention, in their rate of mental development, in the time of entering school, in the regularity of attendance, and in many other ways influencing their progress; yet, because of the manner of grading and promoting, the graded school tends to keep all of the same grade in intellectual lock-step, not only month after month, but year after year for their whole school lives. Children are not alike in ability or in any other way, and God never intended that we should be held responsible for making them alike. Why, then, should we put them in so-called "educational mills" and attempt to grind them out alike, crushing out that individuality which he meant should be a guide to their education and usefulness, and not a hindrance thereto? Is there any reason why we should labor to produce uniformity of tastes, of character, of aspirations, of ability? Is not individuality of more importance than evenness of grading? Is it not the divinity of the child? Should it not be watched for and discovered, that it may be carefully studied and lovingly guarded? Does not biography teach us that those only have become distinguished who have developed a love for work along certain lines?

Is it not time we stop finding fault with teachers because, in spite of all these mentioned differences and many more unmentioned, but not undiscovered ones, they cannot produce "symmetrical nonentities"? Should the teacher, limited in power and by conditions, be criticised because she cannot overcome the differences predetermined by the Almighty?

Surely it is time that the friends of our grand public schools, which are growing in efficiency at an ever-increasing rate, should speak plainly of the defects of the present system and earnestly work for its improvement.

The Elizabeth plan is not an individual plan, but is the result of an attempt to work out a system which will so combine the advantages of class, group, and individual teaching as to make it possible to suit the instruction to the needs of the individuals and enable each to go just as fast as the work can be done well, and no faster. It is no mere theory, but is a plan which has stood the test of a ten-years' trial, and the claims for which are based on the good results which have followed its adoption in several cities, under varying and unfavorable conditions. The plan described is in use in every class in the city of Elizabeth, as well as other cities.

CHARACTERISTIC FEATURES

In place of basing the promotion of pupils, in whole or in part, upon a promotion examination, it is determined by the teachers' careful estimate of the pupils' ability to do advanced work. A premium is put upon the character of the work done day by day, rather than upon the amount of "stuffing" which can be done in preparation for the examination. Thus the pupils are furnished a moderate and continuous stimulus instead of an excessive and spasmodic one. The teaching test is a necessary part of all true teaching, but the promotion examination prevents broad and intelligent teaching, makes out of the teacher a grind, and turns out machine pupils. It is not a good test either of the ability of pupils or of teachers. It is a great temptation to deceit and causes many mental wrecks.

Pupils are promoted to advanced work whenever ready for it, instead of being promoted at a time arbitrarily determined. Surely, there is no good reason why the time of year should determine a pupil's promotion to advanced work. All must agree that it should be determined by acquired ability, rather than by lapse of time. That, under this plan, it is entirely feasible for pupils to go forward at any time is shown by the fact that, during the past year, 60 per cent. of the pupils did so. But for this plan, all these would have had to mark time until the rest were ready to go forward.

Instead of having pupils roughly sorted into large, loosely graded

classes, in which the classification must grow more and more unsatisfactory as time passes, those of very nearly equal ability are placed together in a room. In the essential branches the classes are still more accurately graded, according to ability, into small divisions. Extra divisions are made when necessary, and are not continued longer than they are needed properly to provide for the important differences in the pupils. This is done in such a way as not to greatly increase the work of the teachers. The number of divisions in a grade varies with the number of rooms of the same grade in the building, with the importance of the subject, with the efficiency of the teacher, and with other limiting conditions.

The number of divisions in each subject, as well as the places for individual instruction, is also determined by these conditions, after a careful consideration of the subjects in each grade, and the records of several thousand pupils in the different grades. The number of pupils in each division also varies with the conditions. The larger the number of pupils to select from, the larger the number that can go together for a time without injury. The aim is to have pupils with others of about equal ability, for the nearer the pupils of a class are in ability and attainments, the better can the instruction be suited to their needs, the greater is the power of emulation, the larger the number that can successfully be taught together, the easier it is to hold the attention and fix it upon the subject to be presented, and the better the mental training that can be given. While the usual plan provides for but eight divisions below the high school, this method has from thirty to sixty. In his paper read at the last meeting of the National Educational Association, Dr. Harris, our educational philosopher, who stands without a peer, said : "Thirty classes between the first and the eighth years are possible in large schools in cities. That all cities do not avail themselves of this possibility is one of the most serious defects in American supervision."

Under the usual plan, the distances of the classes from each other, and other unfavorable conditions, make it almost impossible for pupils to pass to higher classes, save at the regular moving times. Yet authorities agree that reclassification is the only way of saving the pupils from the evils of the graded schools. Statistics prove that, sooner or later, nearly all of the pupils suffer because of this inability of the teachers to reclassify them. Under this plan, pupils can easily pass from one division to another at any time, when they are found to be either ahead or behind their companions. The need of reclassification, as well as its feasibility under this plan, is shown by the fact that, during the past year, almost 70 per cent. of the pupils were moved to other divisions between the regular times for promotion. This year an epidemic of measles, etc., has caused not less than 30 per cent. of the pupils to lose time. Under the usual plan all these would have to dangle at the foot of the class and lose

a year. Under this plan they return and take up the work where they left it, and up to February 16, 1898, 54 per cent. had been reclassified, tho but a small proportion (about 10 per cent.) of these had changed teachers. This was done in such a way as not to hinder, but greatly facilitate, the work of the teachers.

Instead of compelling teachers to take all pupils over a given amount of the course by a given time, this plan allows teachers to advance just as far and as fast as the ability of the pupils will enable them to do the work well, and no faster. Not only do teachers vary greatly in efficiency, but pupils and classes differ in many ways, as before stated; therefore it is an outrage to require the same amount of work of all, regardless of the different conditions. Surely this making of the time limit the same for all is the greatest mistake of our schools, both public and private. Why should any teacher be criticised because she cannot furnish the brain cells, health, or conditions which some need to keep up with their more gifted companions?

In place of almost entirely losing sight of the individual, this plan demands attention to the peculiar needs of each. Under the usual plan, as the pupils are crowded into large classes, and all are expected to cover the same amount of the course in a given time, the poor teacher is forced to forget that the class is composed of fifty individuals, and to think only of the fact that all must be at a certain place by the time fixed for all to move; therefore she dare not think of the needs of the individual pupils. Under fear of criticism, she tries to stuff all with the same amount of indigestible matter, in the hope that they will appear big enough to pass the useless examination for promotion. Fortunately, the Almighty has provided the children with good forgetters, and that which would be a mental burden and would result in great injury is soon forgotten. Under this plan attention to the individual is not only encouraged, but required. In the essential branches pupils work in small classes, and also work as individuals at those points where experience has shown there is greatest need of individual work. Thus the teacher comes into close contact with each pupil, than which nothing is more important. For proper mental development, there must be this contact of the mind of the teacher with the mind of the pupil; the separate study of its needs and the separate ministering to the needs which are peculiar to it. Only thus can the strong mind of the true teacher come into life-giving contact with the weaker mind of the pupil for the purpose of restraint, guidance, and development. But while the effort is made to secure all the advantages of attention to the individual, care is taken to retain the many advantages of class and group instruction.

Pupils are generally moved forward by companies, and no record of their ability, acquirements, or mental, oral, or physical peculiarities is sent

with them. Before the new teacher learns these, many of the pupils become discouraged because they are not understood, and, for this or other reasons, quit school or get but little benefit therefrom. . . . . Under this plan, such a record is sent with the pupil that, after a short study, the new teacher has the benefit of all that the previous teachers have been able to learn of the pupil. The record shows, not only what the pupils are worth in each branch, but also any defect of vision or hearing, and any other fact which may have a bearing on the character of the work which may reasonably be expected of each. Difficult cases receive special attention, and suggestions as to their management are given for the assistance of their future teachers.

I have mentioned, but briefly, ten characteristics of the plan in use in the city of Elizabeth. Time does not permit even a brief consideration of the individual records of pupils, the extra promotion blanks, the pupils' reports, the record of work done, the report of principals, management of periods for individual instruction, arrangement of programs, certificate of time gained, means of making sure of thoro work, and many other devices, which ten years' experience with this plan has proven to be most valuable aids in securing results without asking too much of teachers and without unnecessary risk to the superintendent. The proper consideration of any one of a score of points mentioned would have required at least as much time as is devoted to this paper. Having spoken briefly, I have necessarily spoken subject to misunderstanding, misrepresentation, and criticism. However, at this time I can do no more than mention some of the beneficial results which have followed the adoption of this plan, since its introduction into this particular city a little over two years ago.

A FEW OF THE BENEFICIAL RESULTS

The instruction is accurately suited to the needs of the pupils of each division. That the instruction should be suited, both in matter and method, to the ability and attainment of those to be taught is a fundamental pedagogical axiom, upon which all others depend, and with which all others should be in harmony; yet, all know that it is violated in each recitation of nearly every school of our land, for the extremes of the classes cannot be benefited by the same instruction. Accurate adjustment of the instruction is possible under this plan, for the reason that pupils of nearly equal ability are always together.

The most careless observer of children knows that they love to do what requires a reasonable amount of effort. In idleness only is there misery for pupils and teacher. When the pupils were so closely graded that work suitable to all could be assigned, the tendency to idleness almost vanished, and the need of punishment was greatly diminished in

all classes, and entirely disappeared from many. Under the usual plan, all know that the brighter children are not kept busy; therefore they get into mischief; for the idle brain is still the devil's workshop.

Under the usual plan, pupils are not thoro in the work passed over, tho they spend far more time than should be required to do more work well. That they should be thoro in the essential work none dare deny. That many are not thoro most teachers of experience are not slow to admit. Under this plan, all other things are secondary to thoroness in the essentials. This is easily secured, for teachers are not expected to take pupils faster than they can do thoro work. It is no longer wondered why pupils went to school so long and knew so little when they stopped.

All know that, under the usual plan, the bright are injured mentally and morally by being held down to the pace of the slowest; the plodders are likewise injured by being continually driven over the work faster than they should go. By this plan the brighter pupils are allowed to move forward as fast as they can do the work thoroly. The slower ones go no faster than they have the mental ability to do the work well. The mental and moral benefit resulting from this can scarcely be overestimated, and it is, perhaps, the most valuable result of this plan.

Statistics prove that a much larger proportion of the pupils remains in school until the higher grades are reached. In every grammar school in the city there has been an increase in the proportion of pupils in the higher grades, the average per cent. of increase for the different districts being about 10. Surely this is an important matter, for in some cities 90 per cent. of the pupils do not reach the grammar grades, and the reports show that 81 per cent. of all the pupils in the graded schools of this country are in the four lowest years of a twelve-years' course.

On all sides much regret is expressed that so few pupils reach the high school. Less than 2 per cent. get to the highest grammar grade. Since this plan of grading was introduced, two years ago, the number attending the high school has more than doubled, tho the course of study has been strengthened.

All deprecate the fact that pupils entering the high school are from one to five years older than they should be. During the past two years the average age of those entering the Elizabeth High School has decreased more than one year, while the classes about to enter will still further reduce this average.

As the schools are generally managed, if any but the very brightest fall but a short distance behind the class, they must stumble along at the foot of the class and lose a year, when but a month or two behind. Because of sickness, or some of a hundred other reasons, nearly all of the

pupils do lose time, and therefore fail to keep up with their companions. Statistics gathered in different cities show that 80 per cent. of the pupils lose from one to four years; and for every one hundred pupils in the schools examined, there had been from one hundred to three hundred years lost. Under this plan, if pupils fall behind their class, they drop into a class but a short distance behind the one left. As promotion may come at any time, this lost ground is easily recovered. The records in Elizabeth show that, except for absence, very few lose any time.

As under the usual plan it is very hard for pupils to go to advanced work at any other than the time for regular promotions, it is readily understood why but few pupils gain time. Most of those who seem to do so really lose the time later, because they have omitted much essential work. Under this plan, 90 per cent. of those who go thru the primary grades, or farther, will gain from one to four years. The teachers' records of several thousand pupils show that, during the past year, over 80 per cent. of the pupils in Elizabeth gained from one to seven months' time; while the average gain was over three months. This they did without any urging and almost without their knowing it.

In most schools pupils recite nearly all of the time, and there is but little time left for the preparation of lessons in school, where most of the lessons should be prepared. For this reason, either the lessons are not prepared, or they are prepared under the direction of the parents, who should not have to instruct their children, even if they are qualified to do so. With this plan the pupils have more than one-half of their time in school for the preparation of their lessons. Thus they may be prepared under the direction of the teacher, who is best qualified, both by knowledge and experience, to give the pupils the assistance which they should have, and whose duty it is to relieve the parents of this task. Time is provided, both morning and afternoon, for individual help.

Intelligent principals and teachers realize the weakness of the usual plan. More than 90 per cent. of the principals and teachers who have worked under this plan have given, in writing, their reasons for preferring it to any other.

As published, these opinions show that the benefits to the teachers are as many and as marked as those reaped by the pupils. When the plan was started, all were opposed to what they thought the plan would be. On all sides interested parents have expressed great satisfaction with the results obtained.

If pupils receive the same amount of instruction as they would under the usual plan, they would get it in much less time. Pupils now average a loss of about two years. Under this plan they will average a gain of not less than two years. Thus there would be saved to the district what it would cost to instruct a pupil for that time. When this is multiplied

by the number of pupils, the financial saving becomes apparent. Add to this the amount saved by the lengthening of the pupils' productive lives, and the gain is enormous, tho not to be compared with the gain in improved mental habits.

MINIMUM PREPARATION FOR TEACHING

BY HON. PRICE THOMAS, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, NASHVILLE, TENN.

It will be excusable, I hope, if this paper is confined largely to a discussion of this subject from the standpoint of the conditions existing and the changes needed in Tennessee and the South.

The preparation of teachers contemplates the existence in each state of a system of schools uniting harmoniously all those classes of schools which have their part in the training of teachers. Those should be:

1. The primary schools, under teachers holding primary certificates, with a uniform course of study, preparing pupils to enter the secondary schools.

2. The secondary schools, under teachers and a principal holding secondary certificates, preparing pupils to enter the state normal college or freshman class of the state university. This school should be centrally located in the school district, which should, with few exceptions, be coextensive with the civil district. Its principal may also be the district superintendent.

3. The state university and *bona-fide* colleges of equal grade.

4. The state normal college or a department in the state university, issuing primary and secondary certificates.

5. The state teachers' institute, issuing primary and secondary certificates.

The minimum requirements for a primary teacher should be equivalent to those necessary to obtain a primary certificate from the state normal college.

The requirements for entrance into the state normal college for a primary certificate should be the satisfactory completion of the primary and secondary courses of the public schools.

For a primary certificate from the state normal college one year's course of study therein should be requisite; for a secondary certificate there should be required a diploma from the academic department of the state university, or a college of equal rank, and a two-years' course in the state normal college.

The course of study necessary to obtain a certificate from the state normal college should be purely professional. It should consist of:

1. A course of professional reading, including text-books on methods, pedagogics, school management, psychology, and history of education, and some standard school journal.

2. Essays on professional subjects and the reproduction by the student of the lectures of the instructors.

3. Daily observation, with professional explanation of model primary teaching.

4. Practice in teaching primary classes under the direction and criticism of the normal instructor.

Practice in teaching under the direction and criticism of the college instructor, and the observation of model teaching, are necessary for the correction of false ideas of instruction which may have been imbibed from former teachers, and which it requires practice and time to eradicate. These are too apt to be unconsciously adopted by the young teacher, when thrown upon her own resources in her initial performance in the schoolroom, unless that first teaching be under the direction of her tutor. But when correct methods have been observed daily for months, and practice has been had in such methods, the teacher will have had them so impressed upon her mind, and will have so "learned to do by doing," that she will be at home with her work on the fatal first day as an independent teacher. The model school is the teacher's laboratory of the teacher's training school, where the normal student can see and have explained the method, its reason, object, and result, and where she does her laboratory work in mind study, child study, and character study.

There are several reasons why the normal-school course should be purely professional. There are hundreds of schools in each state where subjects can be learned as well as in the normal college, while few states have more than two or three *bona-fide* normal colleges. The entrance requirements should be such that the normal colleges should be relieved of the work of teaching subjects. Their resources could then be all expended in giving to the teacher the professional training which many so much need.

The best results are reached by illustrating methods by teaching subjects familiar to the pupil, and subjects which the student will afterwards teach. The child studies subjects with the view of learning facts—of obtaining knowledge, while the true teacher idea is the development of the mind—the growth of the powers of perception, reason, and resource. The child must always have learned the elementary subjects in a more or less superficial way. It is best that the normal student review these subjects from a different standpoint, with the view of teaching

them, with the idea of giving reasons, with the purpose of becoming master of them. The child follows the author of the text and the teacher blindly. The teacher in training should study from the standpoint of equality with the author—should get at the foundation, and should be able to teach without a text-book, if necessary. To "know how to teach" it is not only necessary to "know how to study," but to know also the purpose of study and its results, and to know the subjects from the top and from the bottom—from the pupil's standpoint and from the teacher's. It is true, not only that the "methods of teaching can best be illustrated by teaching," but by teaching again to teachers, as teachers, what they have formally learned while children, as children. I conclude, therefore, that normal schools for primary teachers should teach only primary subjects, and these only for purposes of illustration of methods and reasoning; and, for the same reasons, primary normal students should observe only primary model teaching and should practice teaching with primary classes only.

One of our troubles in Tennessee lies in the fact that "practice teaching under criticism" and "observation of good teaching" cease with graduation. We need that the county superintendent should continue in the secondary schools, and the district superintendent in the primary schools, the work of the model teacher and the critic teacher of the normal school. Our city schools, and a few districts in some of our counties, profit by this critical supervision. In this we have most satisfactory results, while in the country schools generally they are poor. It may be argued that the standard for the country teacher should not be as high as for the city teacher. I think it should be. The country school ought to be as well graded, as well taught, and in every other way as good as that of the towns and cities.

It is a calamity that the best people in the country are moving into town to educate their children. The country communities suffer from the loss of their more intelligent and progressive citizens. The cities and towns are crowded by non-producers, unfit for town life and unhappy in the change, while their children are surrounded by influences in the towns which are not so wholesome as those of the country life to which they were born.

But the state normal school cannot supply our schools with professional teachers. The state and county institutes must make up the deficiency. These institutes should be devoted to purely professional training, such as has been suggested for the state normal college. The requirements for entrance to these institutes should be the same as those necessary to enter the state normal college, with the addition of the careful study of the subjects, above mentioned, in pedagogics, psychology, history of education, etc. Primary certificates should be issued by these

institutes only upon satisfactory examination of these subjects, and on the subjects taught in the primary and secondary schools.

The object aimed at in fixing the standard for primary teachers should be the improvement of our country schools, especially, and as a prerequisite thereto the creation of a body of professional teachers. This will bring about the following results:

Professional teachers will do better work and thereby increase the interest in education; the school fund will cease to be used for pensioning incompetent relatives and friends of school directors and politicians, and wasted in many other ways; the proper use of the funds, the increase in the interest and efficiency of the schools, and the growth of the intelligence and morality of communities will be accomplished; the people will demand that the state and counties provide for the proper education of the people in the country, as well as in the towns and cities; and the teacher doing the work of a master workman, and not that of an apprentice, will receive a master workman's wages.

RECIPROCAL RECOGNITION OF STATE AND NORMAL-SCHOOL DIPLOMAS BY THE STATES

BY Z. X. SNYDER, PRESIDENT STATE NORMAL SCHOOL, COLORADO

In opening this discussion, we present some data taken from the report of the committee of the Normal Section of the National Educational Association at Milwaukee.

The data are taken from the investigation of Inquiry 9, "Recognition of diplomas of other state normal schools in other than the state in which they were issued."

1. Are diplomas from normalschools of any other state than your own recognized in your own state? Answer: Yes, 15; no, 21; conditional yes, 5.

2. If so, to what extent? If all states are not recognized, name those that are. Answer: Michigan recognizes Pennsylvania, New York, Indiana, Delaware, and Wisconsin; Wisconsin recognizes New York, Illinois, Massachusetts, Pennsylvania, Kansas, and Michigan; New York recognizes reciprocity.

3. If none are so recognized, state reasons why. Answer: No law, 14; unequal standard, 6; no need, 4; reciprocity, 2.

4. Do you think it would be well to have comity of states in this matter? Answer: Yes, 31; no, 3; no answer, 14.

5. If such a plan were adopted, would it not be necessary for the

normal schools in the several states to have courses of study approximately equivalent? Yes, 36; no, 4; no answer, 10.

6. What plan would you suggest to make normal-school diplomas national in their significance and legality? Answer: Legislation, 4; controlled by National Educational Association, 2; reciprocity, 4; not answering, 29.

The above data were gotten from the state superintendents of the forty-eight states and territories.

(1) It would seem that there is a majority of the states that do not recognize diplomas from other states. (2) There are states in which the law forbids recognition, and a number in which the law is silent. (3) There is a general feeling that there should be recognition.

It may seem strange that a representative of Colorado should argue the affirmative of the proposition. Colorado is a very exclusive state. No credentials whatever can be recognized under the present law. It is because of these conditions that we are led to feel that such a law is in a large degree absurd.

It is not because we are anxious for *our* diplomas that we urge the matter. It is because of *your* diplomas. Few of ours leave the state; many of yours come. It makes no difference what the qualifications of an individual may be, were he to come to our state he would have to undergo a petty examination.

It seems that there are a number of reasons why there should be national recognition of the state diplomas.

It would be a great convenience to the individual who held a state diploma to have it recognized in any state. It is a matter of no little concern to an educational man to be subjected to an examination. An individual who has been devoting his best self to his work of teaching is very properly disqualified to pass the ordinary technical examination. Such an ordeal chagrins him, makes him hate his business.

It has driven good men out of the business. It would be about as consistent, in the selection of a college professor, to require him to pass again the entrance examination. Not one in twenty who has been out in life twenty years could pass it. It is to his credit not to be able to pass it.

It is a courtesy that should exist among the states. There seems to be a lack of faith in each other's work. It sometimes seems that it is the teaching fraternity itself that stands most in its own way. The war-cry seems to be examination. As Sir Thomas Browne says: "It is a practice that savors much of pedantry." Let us believe that other states do good work.

National recognition would tend to raise the standard of many schools. Especially would this be true were there a minimum require-

ment. It would inspire schools that now have meager courses to enlarge, expand, and enrich their work, that they might receive national recognition. No school under the control of the state would want to be cast out of recognition.

It would tend to professionalize teaching. Professional spirit would become more organic. It would tend to vitalize the great army of teachers. This matter of disregarding the work of other educational men, ignoring training that is at par with the best, tends to deprofessionalize. It has been said that educational men are slow to move, and that all great educational movements have been forced by laymen. Be this as it may, the teaching fraternity in this country would be more respected, would be more professionalized, by a national recognition of preparation for teaching.

It would tend to develop the notion that we have a common country, common interests, common fortunes. It would tend in general to nationalize. There is considerable tendency to provincialize. This tendency follows somewhat the geographical political divisions. This tendency to localize interests is seen in the bitter sentiments expressed on various political issues. It seems that everything possible should be done to bring about homogeneity of sentiment among the American people. Out of such only can grow the strongest patriotism. This must come thru education. If it is to come thru education, there must be such sentiment among the educational men of the country. There must be a recognition of the labor, scholarship, and worth of a man as determined by his fellows where he has worked, and not by a petty examination, which only tends to chagrin and mortify him.

It is said that General Grant expressed himself that, if the national university had been founded when Washington made his donation, the Civil War could not have occurred. It would have developed such a homogeneity of sentiment for man's freedom that long before the Civil War we would have had a free people.

If this country is to work out her mission, it must be done thru her educational system. The facilities must be American; they must be national. While this matter of professional recognition may seem but a small one, yet it is one of the factors which tend to nationalize our system of education.

Summing up, we would urge that the educational men of the country lend their support to bringing about a recognition of state diplomas of all the states, by all the states: (1) because of the effect upon the individual; (2) because it is common courtesy; (3) because it would tend to raise the standard of the schools; (4) because it would professionalize teaching; (5) because of its general effect upon the nation.

While we may all agree to a national recognition of diplomas, it might be difficult to accomplish it.

Some have suggested equivalent courses, some uniformity of courses in training schools. It would seem that a similarity of training would furnish the best criterion by which to determine the product. As most of the state normal schools are at the present time, no state would suffer materially from difference of product. Should a minimum course be adopted by the state normal schools and a minimum examination for state diplomas, it would help to solve the difficulty.

As to its regulation, it would have to grow out of legislation. The states reserve the right, as they should, to regulate their own school affairs; yet the educational men of the country can do much to bring about such legislation as will further the organic unity of the national life.

MEDICAL INSPECTION OF SCHOOLS

BY W. B. POWELL, SUPERINTENDENT OF SCHOOLS, WASHINGTON, D. C.

To make life safe and to secure health and happiness to those who are governed are among the most important duties of government. Life, liberty, and the pursuit of happiness may not be restricted by government directly without inducing disrespect and even contempt for that government. But it is equally important, and is imperative from a moral point of view, for the government to see that rights, privileges, and blessings are not curtailed or endangered by carelessness or shortsightedness on its part, or by any lack of effort on its part to prevent curtailment and danger. Sickness and disease restrict physical liberty and prevent the pursuit of happiness. It is unwritten law that privileges increase responsibility, and that responsibility is increased by power and authority. Complex conditions of human society multiply the duties and responsibilities of government, and, while increasing privileges, they impose restrictions on the individual. Restrictions imposed by government increase the obligations of government to protect the governed from those ills that logically result from such restrictions.

Prevision and supervision, prevention and formation, are talismanic words in the vocabulary of human interests. The school, the public school especially, by dealing with people in masses, has developed the value of the activities in human society named by these four significant words. By prevention and formation, which can be secured thru broad, intelligent prevision and supervision, both the mind and body of

the child may be symmetrically, if not perfectly, developed, and a healthy condition given to both. Correspondingly is this true of the community and the state, which are made of individuals. Not only does a government derive its just power from "the consent of the governed," but it gets its character from the same source. There can be no doubt in the mind of any well-informed person that a large percentage of the physical ills of a community may be prevented by intelligent prevision and appropriate care in formation. The signal service of the government saves to the people by preventing loss that would equal many times its cost. This benefit of the service, however, is insignificant when compared with that of saving life and preventing accident to human beings. By effort of government, local and national, in the summer of 1892 cholera was prevented from getting a start on this continent. What dark evils were thus averted may only be guessed; they can never be known. The value of quarantine is so well understood and appreciated that argument is not needed to cause it to be employed by government in cases of apparent wide public danger; it rests on the principle of prevention. It is customary now in all intelligent communities to quarantine cases of certain kinds of disease, as small-pox and diphtheria. But he who knows, as does the superintendent of schools, the conditions existing at the time of quarantine in many cases knows also how much more effective and perfect would be such quarantine, and how much of contagion and harm would be prevented, were the prevision earlier, more accurate, and more intelligent. Most of the cases of quarantine in our communities come too late to prevent entirely the spread of the disease which they are intended to check, thus causing much distress and hardship.

The exercise of power in the enforcement of school attendance or of effort in securing it is dangerous, and therefore unwise, unless it is accompanied by a conscientious appreciation and an adequate exercise of the duty of seeing that the assembling of pupils may be had without physical or moral harm. Not only is it the right, but it is the duty, of the community or school authorities to know when pupils assemble that the rooms in which they work shall be, not only well, but properly lighted; not only well, but properly warmed and ventilated; not only well, but properly seated; that contagion is not only not imminent, but that it is not possible. This condition of affairs, however, can be secured only by intelligent, expert prevision, which prevision is not possible by the present ordinary means; that is, thru the school as it now exists. There are not appliances for determining now. There is not expert knowledge. Skill to see and wisdom to determine are not possessed. We have not yet acquired these, except in small degree. We know only partially of lighting, warming, ventilating, and seating. We know little

or nothing of the evidences of approaching disease of any kind. There is no doubt that in the significant movement now going on, resulting already in making school better and more effective, the larger share of such benefits or improvements has resulted from increased knowledge on the part of teachers and school officers; but we have not yet knowledge enough to do that which advancing society demands of the school. The increased, accurate knowledge that scientific investigation has given us in recent years makes it possible to prevent much of human suffering and danger, and thus is added a corresponding duty to the work of the school. Increased knowledge of the laws of sanitation, sources of physical evil, and causes of contagion makes prevention the most important function of the health department of government.

Contagious diseases are not the only ills against which to provide. These are not the only diseases to which to apply prevention, guided by broad and intelligent prevision. There are diseases not known as acute, sporadic, infectious, or contagious, whose premonitory symptoms, or whose beginnings at least, can and ought to be detected in time to prevent development. The expert physician will not only know these beginnings promptly, but he will know their causes, also. If the causes exist in the schoolroom, they can be removed; if they exist at home, something, at least, may be done toward removing them. Diseases of the eyes, the ears, and the lungs; heart troubles and numerous other ailments, have their beginnings, in many cases, in heredity, but in quite as many instances they result from the conditions of environment, the formative agencies of life after birth. They may be found in the home or in the school. The way pupils are allowed to sing, the way they are allowed or forced to write, the way they are allowed or forced to study and recite, the way they are compelled to sit, may be harmful. Conditions may exist in the schoolroom or school yard which will lead to the impairment of lungs, or will produce rheumatism or other ailments that may develop during the formative period and become chronic, yet the teacher, the principal, the superintendent, or other school authority, be ignorant of their existence. Dirt and cleanliness have meanings from the standpoint of health differing widely from those commonly given to them from the standpoint of neatness in housekeeping. Dirt from the point of view of the bacteriologist has a more significant meaning in relation to human interests than it has from the point of view of the most careful janitor or the model housewife. To be clean from a sanitary point of view is to be free from that which will cause disease. This kind of uncleanliness can be detected only by the expert. Only he who has learned to do the right kind of seeing can do this work right. If the state which locates, lays out, and prepares a highway over which people may travel is responsible for accident or harm occasioned by neglect to repair damages or breaks

in such highways, or breaks in bridges forming parts of such highways, it must be that the state which provides places of meeting, or allows places of meeting to exist, and compels or allows the assembling of children, yet neglects to provide by intelligent prevention against contagion or any cause of disease whose evidences can be detected by expert seeing, will be held responsible for sickness thus induced. It is certainly responsible from a moral, if not from a legal, standpoint, and if it is responsible from a moral standpoint, the state has proved itself fair enough thru just interpreters of law to assume the legal responsibility.

THERAPEUTIC ASPECT OF THE QUESTION

I have shown in the foregoing the value of prevention rather than that of cure or therapeutic effort. I have pleaded for the "ounce of prevention." The subject under consideration is important enough to deserve attention from the standpoint of therapeutic or curative benefits. Many children are defective other than those who are blind, deaf, or feeble-minded. The state takes care of the blind, deaf, and feeble-minded by the most approved methods in costly institutions. Why should it not, with equal justice and propriety, care for those who show beginnings of spinal curvatures, symptoms of pulmonary troubles, defective eyes or ears, symptoms of nervous weakness of various kinds? A large percentage of these persons showing only the earliest stages of defective conditions when sent to school may be promptly benefited by application of easily found remedies, or perhaps chiefly by change of manner of living. To detect these conditions, however, requires the skill of an expert. Many children have difficulties with one or both eyes of which the parent is entirely ignorant. But these difficulties, being at first very slight, can be cured at small cost. The trouble may be checked by the use of properly adjusted glasses. The therapeutic or curative value of the work of which I now speak is based on the idea of "a stitch in time." This "stitch in time" would save many an eye and many a pair of eyes, many an ear and many a pair of ears, many a throat and many a pair of lungs. Some children ought not to come to school at all until they have had definite medical treatment, or at least expert technical treatment, for ailments that are rapidly leading them to early graves. These ailments are more than likely to be aggravated by the conditions and restrictions imposed by school life. In very many instances these require, to prevent their further development, only a slight change in the manner of living, on the part of the afflicted, respecting eating, sleeping, or dressing. It would be a greater blessing to the boy, and if to the boy to the community or state, to have saved for use during a long life of activity two eyes, than to give him a modicum of school instruction and thereby either ruin his eyes for life or so aggravate their condition as to make them an

annoyance to him while he lives, and prevent him from acquiring knowledge and making himself a useful man by one of the chief instrumentalities of knowledge-getting. It is perhaps fortunate, if our own happiness is considered, that we do not know the number of incipient spinal curvatures that are aggravated by school life and developed into permanent and serious deformity. By how slight an effort, from the standpoint of expert knowledge, such serious results may be prevented, every school officer should consider with profound, if not solemn, attention. From the humanitarian standpoint alone the discovering of congenital difficulties and incipient ailments induced by wrong living, pernicious environment, or the wrong use of those things that affect and make life in the formative period, and the judicious giving of direction or advice to parents or guardians for the application of simple but correct methods for curing or improving conditions which may be easily effected, are primary and emphatic duties of public-school authorities. It is no less the duty of the state to care for these incipient cases of disease than it is its duty to care for those whose misfortunes are more pronounced. The relation that the public school sustains to government in a democracy makes it imperative that the physical care of the future citizen shall not be neglected, because it is certain that it cannot be neglected, without menace to citizenship, which, to be of highest value, must be pure and physically sound. By how slight an obstruction at the right place the falling rain is directed toward one or the other side of the continent; by how slight a beginning a break in the dam, undiscovered and unchecked, results in untold destruction of property and human life! These but poorly illustrate the menace there is to human society in incipient disease among the ignorant. I ask you to recall Johnstown and the Conemaugh dam. The proprietor who fails to discover, or, having discovered, fails to check, the widening breach in the structure which holds a great body of water, with its untold possibilities of damage, is accounted criminal by public sentiment. This same sentiment recognizes the responsibility of the state to the citizen, who is a part of the state, respecting all matters that may influence the moral and physical conditions of the individual.

THE ECONOMIC VIEW OF THE SUBJECT

From a financial or economic point of view, the school can well afford the care that has been suggested from the standpoint of prevention as well as that suggested from the standpoint of therapeutics. The loss of time occasioned by sickness and disease resulting from school attendance that might be easily prevented is of money value greater than that which it takes to support the school as it now exists, if the calculation be not restricted to school life alone, but be made to include the value of time lost by parents and nurses, and others involved and affected.

But in a more restricted sense there would be economy in first caring for the health of the children, because the teaching could and would be more rapidly and more effectively done. The growing child not in good health is ill prepared for the psychic building or making which correct school methods are intended to secure. The psychic self is not its true self except in perfect health. The teaching, no matter how attempted or how well done, will, by force of circumstances, be ineffectual, and, more than this, it may be pernicious in psychic effect, and, indeed, is likely to be so; that which is intended to be accomplished may be taken wrong by the child, and, if taken wrong, the psychic effect will be the opposite to that which it was intended to be. Who, then, is to know whether that which is attempted in the schoolroom may not result in the wrong thing, or at least be ineffectual or of little avail? The teacher should know the child physically better than he does. But this first condition of requirements the teacher does not possess.

THE SUBJECT VIEWED IN THE LIGHT OF SCHOOL GOVERNMENT

From the standpoint of school government alone, the police side of the management of schools, it would be profitable and businesslike, and in accordance with the way business matters in human society are generally managed, when managed successfully, to see to it that the children are in healthy condition, and that they are so situated that health, and therefore physical conditions conducive to physical happiness, are assured. Truancy would in a large degree be prevented, because, by teaching healthy children, the teaching exercises of the school would have the effect of giving pleasure and gratification, thus insuring against pleasure-seeking in truancy, as well as in other misconduct. It were better to prevent truancy and dislike for school than to try to cure them by reformatory measures. This would be prevention from the standpoint of control or government, and because, what the child is in the school he is practically when he leaves school; this alone would compensate the state or the community for all the trouble and expense that medical examination and supervision might cause.

MEDICAL INSPECTION A VALUABLE EDUCATIVE INSTRUMENTALITY

The most important argument in favor of medical inspection of schools and school children is the educational benefit it would be to the community at large. Its direct and naturally aggressive tendency would be to make knowledge of the common laws of health universal and to create an interest in the study of social life. Intelligence respecting the effects of modes of living on length of life, on happiness of life, and on cost of living, is very meager, especially among the lower classes of society. The school has reason to know and to understand the disad-

vantages of this condition economically and morally. Knowledge of these subjects would grow rapidly if the school would take hold of the matter purposively and would cause people to begin knowledge-getting in experience. Medical inspection would result in giving knowledge of conditions and causes, and would suggest changes in modes of living, with reasons for the same. These would cause thought and would give information to satisfy the same, which, with the purposive effort induced in the realization of suggestion, would educate in the most effectual way. This experience would create interest, which, in turn, would insure further knowledge-seeking by means of reading, attending lectures, by inquiry, and in many cases by original investigation and experiment. Is it not the duty of the school to arouse society to intelligent thought on the importance of better modes of life? By no other means can this be done so effectively. Is it not the duty of the school to train people to live better? Is not this the true purpose of the school? The logical place to begin this is with the physical life of society, the one phase of life that has been most ignored by our educational methods, because least thought about, and until now least understood.

One of the most valuable products or important benefits to society resulting from public-school effort in education is that which comes from individual contact of pupils having different degrees and various opportunities of experience. The less fortunate element of society gets the benefit of culture and knowledge possessed by that portion which has much to give, because it possesses much; it has received much by the circumstances controlling it. It should be the purpose of the school to use every instrumentality of possible possession to broaden the child's view of life and of society. The school in many localities has done much for society, beside instructing the children in attendance, by this unobtrusive and generally unobserved influence. It is the crowning value of the public school, and the most assuring reliance of republican government, that its most fortunate children may be educated with those possessing the least desirable advantages in their surroundings, without a social or moral harm. This assuring fact is the patriot benefactor's anchor of faith in free and compulsory education.

The man who controls public affairs will yet be brought to see that the three R's do not, cannot, educate for intelligent citizenship. He will yet see that they do not make even the beginnings of broad, safe citizenship.

In many cities homes have been changed by the instrumentalities of day school. The addition of music to the school work has resulted in taking music to the homes of thousands where before it was not heard. Beautiful, refined rote songs on subjects that are themselves elevating and inspiring have changed the homes for younger children and for parents as

well. The introduction of drawing into the schools has been the means of carrying art — crude, indeed, in its beginnings, but valuable in its influence — to homes without number which had before felt nothing of such influence. The effect of song and art on the homes and people who especially need song and art to make beginnings of influences that would result in better and happier lives has compensated the state a thousand fold for all the cost of these so-called fads. The subjects to which art has drawn the attention of pupils, where art has been properly taught, has effected untold benefit to children and parents.

The philanthropic worker in the degraded or slum portion of the ward will tell you that the establishing of the primary school in that locality has changed, not only the conduct of the children, but has changed also the lives of the mothers and fathers, and the character of the homes of that locality. The beautiful song is heard in the doorway now, where before slang, profanity, or sounds of sorrow or anger were heard; and the drawing of the child or cheap chromo may be seen now on walls which never before had known any attempt at ornament of any kind. These are evidences of the beneficial results of school effort to him who knows how to see; who knows what influences effect better lives and better living.

The introduction of domestic science, into the school of the cities especially, has had its influence, not only on those who are taught, but on thousands of mothers and older sisters. Evidence that is unmistakable in character, and that is voluminous in amount, assures us that the sewing, and the cooking, and various other economic lessons learned in connection with them, affect thousands of homes, making them better and more comfortable, thus producing wiser, better, and more contented citizens. The dollars that the community spends for cooking schools, manual training schools, sewing schools, are insignificant in value compared with the increased happiness, the broader-minded citizenship, and resulting safety secured to society. He who looks on these things and sees them in an opposite light looks only from the standpoint of dollars. If he will look and see from the standpoint of humanity or good government, he will never again speak of them as fads, or regret the increased expense of the school, or criticise the multiplicity of kinds of work that the child is caused to do because of them.

There is a more important, a farther reaching, and more potent instrumentality yet to be brought to the schools than has yet been introduced, except in a few places: that of medical inspection. That it is by means of which the people may learn how to live better, may learn how to detect imminent evil, and how to prevent it. That it is by means of which the people will be induced to study their own environment and the influences that have made them what they are, and are continuing to affect and fix their condition. The school must ally itself more with society,

and make itself felt more as an instrumentality in society for benefiting the individual and making society better. One of the most fruitful ways of doing this is to interest the intelligent, educated, scientific element of society in its welfare; to learn from this element, and to invoke its aid in every particular in which it can give benefit. The benefit to be derived from this wise and competent source of information and suggestion is that exact kind of influence that always goes from the school to the home, just as the effect of domestic science goes from the school to the home to change it and make it better, and just as the instrumentalities of kindergarten methods and of the best primary-school methods have gone from the school to the home, affecting not only younger children at home, but mothers and fathers as well. The day will come when the community at large, even the lower element of it, knowing something of sanitary law and sanitary appliances, will seek to know more and to understand better how to live; and the instrumentality thru which it shall be brought about is the public schools, allied with the educated portion of society.

REALIZING OUR FINAL AIM IN EDUCATION

BY SYLVESTER F. SCOVEL, PRESIDENT OF THE UNIVERSITY OF WOOSTER, O.

"Realizing Our Final Aim in Education" is, of course, logically sequent on having a final aim. This address should properly be preceded by another on "Character as Final Aim in Education." The discussion of our end or object is becoming a very frequent and familiar one, and I must be pardoned a word on that which is fundamental to this.

We are fortunate to have really found a final aim, since Aristotle could say as to the confusion then existing the following: "What, then, is education, and how are we to educate? For there is yet no agreement on the point. All men are not of the same opinion as to what the young should learn either with a view to perfection or to the best life. Nor is it agreed whether education is to aim at the development of the intellect or of the moral character. Nay more, from the ordinary standpoint the matter is quite confused, and it is not clear to anybody whether we are to train in what leads to virtue, in what is useful for ordinary life, or in absolute science. All these alternatives have their advocates."

And so far as I can judge from the able and scholarly paper of Professor Gordy, there yet seems to be uncertainty as to the end of education among us. There can be little dissent from his general postulate that the end of education will be determined for each individual

by his conception of man: that Plato would educate for dialectic, intuitive power; Aristotle for the intellect's supremacy; certain religious teachers for the capacity to believe certain doctrines; Dr. Dewey solely for society; Herbartians for such "interest as would invariably impel the individual to certain kinds of conduct;" Davidson for "rational living" by the four elements of knowledge, discipline, cultivation of the emotions, and will-training.

While we must all heartily agree with the general conclusion of the valuable paper concerning the limits of genetic psychology, I do not share the uncertainty which it seems to convey concerning the final aim in education. It is not incomprehensible, because the main elements and outlines and meanings of human nature are not incomprehensible. The drift of the world's thought today is in the direction of the value of the man's nature as a moral being. And he is, therefore, in himself (and necessarily in his relations), as a moral being, the first end of his own education. There is no difficulty in unlocking a door with a master-key which fits all the wards; and the supremacy of the moral in man is that which brings all individuals, all society, and all history into harmony with the surrounding universe, and with the God who made it and is now immanent in it.

I may beg leave to add just here that I know of no religious view of man which ever found expression in an education so narrow as to be completed in man's belief of "certain doctrines." On the contrary, the world's education is an ethical progress toward an ethical end, driven by the sanctions of one divinely ordained and authoritative system. Creed and deed are never divorced in Christianity. This is abundantly proven by the history of civilization, and nowhere better exemplified than in America, where our education of every grade has been predominantly and almost universally Christian—and remains so today.

Moreover, it may be noted that Aristotle is by no means committed to the supremacy of the intellect. On the contrary, he holds that the moral conditions the intellect. Hear his words in the *Ethics:* "It is by the gradual perfection of the moral nature, and by this method only, that we are brought into that state in which the intellectual principle is able to act purely and uninterruptedly. The improvemeut of our moral and intellectual faculties will go on parallel to one another. Every evil habit conquered, every good habit formed, will remove an obstacle to the energy of the intellect and assist in invigorating its nature."

Parallel with this the noble utterance of Erasmus D. MacMaster (once president of Hanover and of Miami University, in Ohio): "Nothing, nothing, but the predominating influence of high moral rectitude as the governing power in man can give that enlargement and capacity to the intellect, that force of thought, that vigorous tone of sentiment, and that

firmness and consistency, which are essential to the highest order of mind." (Hanover, 1844.)

There can be no controversy over the assertion that our view of the end to be sought in education will be determined by our view of the nature to be educated. That is simple common sense, and the foundation of all scientific inquiry into the lesser facts of our mental structure and history from childhood up. But the wonder is that there should be any controversy as to what the great leading, dominant, distinctive characteristic of our nature is. That fixed, the end of our education is fixed. There are many indications of this broad and deep view of our nature being held. John Stuart Mill says:

> Education includes whatever we do for ourselves, and whatever is done for us by others, for the express purpose of bringing us nearer to the perfection of our nature. In its largest acceptation it comprehends even the indirect effect produced on character and human faculties by things of which the direct purpose is different (e. g., laws, arts, government, industry, social life, physical environment).

The same broad view of man's nature and relations appears in the definition of education's aim as given in the charter of the Leland P. Stanford, Jr., University:

> The object is not only to give the student a technical education, fitting him alone for a successful business life, but it is to instill into his mind an appreciation of the blessings of this government, a reverence for its institutions, and a love of God and humanity, to the end he may go forth and by precept and example spread the great truths, by the light of which his fellow-men will be elevated and taught how to attain happiness in this world and in the life eternal.

There are implied our whole nature and our sublimest relations and the underlying truth that, character once made the appropriate end, conduct will be sure to follow. So Froebel: "Education consists in leading man as a thinking, intelligent being, growing into self-consciousness, to a pure and unsullied, conscious and free representation of the inner law of Divine Unity, and in teaching him ways and means thereto. . . . . The object of education is the realization of a faithful, pure, inviolate, and hence holy life."

For us the perplexity is over. Education is itself so great that only character is a target large enough for its final aim. But character is peerless. It is the sum of our moral attributes. It is greater than circumstance, as the underlying geometrical truth is greater than the chalk lines on the blackboard. It is the true measure of our worth, the standard of intrinsic human values, and of that judgment which this world is constantly making up, and which the next world will but complete and exhibit. Character is being, and it is nobler to be than either to have or to know. Character is the indispensable first need of man for himself, and the equally indispensable first requisite for every combination in which man must live — family, church, or state.

Every view of education which has made anything less than character its final aim has proven seriously defective. Materialism has endeavored in vain to destroy the connection between the two by denying our ability to form character, and making both mind and morals absolutely dependent on external conditions and antecedents. The unthinking multitude which regards "a living" as the end of an education is much more influential in preventing the accomplishment of the final aim; but civilization knows that merely a living is not all that man needs. And they who think of learning as the end of education are giving way to better things. Men must know how to manage what they learn. And even those who have striven to substitute power for learning, and talked long and earnestly about "leading out" the powers and faculties, are discovering that everlastingly leading out things is only to dissipate the power you create. Now the point of rest is sought. The point is demanded where power and learning, living and the physical basis of life, shall all be tributary to character; and where the man — thus to be formed — shall be made the chief end of all his education. The first defective view regards only the physical conditions of education; the second looks at the money in education; the third says the knowledge is the education; the fourth thinks of mental skill and discipline. All are seen on the instant of comparison to be far below the true view in dignity, in comprehensiveness, and in practical value. The view which makes character the end of education proposes to stop nowhere short of that which is highest and noblest in man. Education will not linger in the outer courts, it has a message to the king! The true view holds it to be well-nigh self-evident that the culture of the living powers is valueless (in the best sense of man's value), and even dangerous, if it be robbed of that which must go before it and come after it — the culture that gives the trained body and disciplined mind to the care and control of an educated conscience, and a wide-awake but well-controlled will, and a matured and symmetrical character.

The world began with its Tubal-Cains and Vulcans and Jubals and Mercurys to educate its fingers and its senses. But the very process made it avaricious, and knowledge systematized and written and transmitted became the temporary end of education. But the living powers are always more than any of their contents, and to educe them rose in its turn to the supreme place. But there was motion, and motion implies direction and end, and now the fair, full ideal begins to gain acceptance everywhere. The pendulum swings no more from body to mind, but rests on soul, into which (as a great center) flow all the forces from either side.

With this we are ready to proceed to that most natural of inquiries introduced by the announced theme. The object is a great one, but

what opportunities are there in the ordinary course of school and college life for developing character? There is a savor of making bricks without straw in this high demand — confessedly the highest possible demand — made upon those the very condition of whose employment would seem to constrain them to do something else, and to do that with all their might and main.

The teachers say: The points to be made in the intellectual plane are so definite and so difficult to attain that the moral plane remains practically inaccessible. So much time is given to the *technique* of education that we cannot do much in looking after the spirit of the matter. We are in a measure forced to be martinets in training; the *morale* of our troops must come from some other source. Examiners who test our work do not question on morals; and all work done in that line would not amount to a row of naughts, as to our advancement in the profession. Even parents do not send their children to us to be made good, but to be made smart. The first thing they will take care of themselves (tho we notice they fail in it sometimes). You demand the impossible. The theory is fine, but practice evaporates it.

The scholars and students say: "You tax us so much intellectually; 'give us a rest' on the morals. We have too many knotty problems to wrestle with to waste any time in speculating either about what we are going to be or ought to be; the main thing now for us is to know — and to know to the dot — and to know both outlines and details, and to show that we know in quick answers. We have too many Latin and square roots to grub to be looking away into the stellar spaces for large inspirations. We are here to learn arithmetic, and not behavior, and to get on in this world, not to get ready for another." And so on you shall hear in great variety, with many side voices of like tenor, from those who are afraid something Christian will be done in the schools, or from directors who are determined on the highest intellectual product at any cost, or from the natural restlessness and impatience of our American spirit. The point of unity in all the cries will be this: However desirable character-making may be, it is not feasible thru the ordinary processes of our educational institutions.

But for all this, while acknowledging frankly every difficulty in the case, I hope to show that in and thru our school and college work there lie abundant opportunities to form character of the completest and highest grade. The means, I dare to say, are ample, and the opportunities the very best the world affords. The opportunities are both direct and indirect. Along the line of immediate and daily duty lie these possibilities, and thick in all the interstices of busy educational intercourse are hidden a thousand more which may be developed by care and watchfulness.

And in this claim I have the gracious sense of defending your work and mine from the most damaging accusation ever cast upon our educational life, viz., that it does not and cannot make a high type of character. Foreigners have openly made the charge, and there are those who urge it at home, and there are other thousands who are tremulously fearing that there may be some color for the charge, and beginning to wonder why we have not better generations as well as more highly educated ones.

To all, of all classes, we desire to make answer that teachers, and boards, and parents, have no defense to offer of any system of education which either prevents or fails in making character. For one, so convinced am I of the ample opportunities given us, and of the certainty of their improvement, on the one hand, and so profoundly convinced that no possible result can atone for the want of character-making power, that I am ready to say distinctly: If our system hinders or destroys character, or simply stands in place of another that can make character, then it may, can, should, and must go! You see, then, fellow-teachers and parents and patrons, where at least I land myself, if I fail to make it evident that there are very good — I might say sufficient — opportunities (if well improved) for character-making, in our educational processes.

1. To begin, then, with the simplest possible proposition. The formative period of character is the school and college period of life. Up to entrance, consciousness is but barely developed, and consecutive thought and philosophical memory are nearly unknown, and power to comprehend moral distinctions is exceedingly rudimentary. In such a state of case it cannot but be that the whole series of educational influences — the schoolroom, the recitation room, the examination days, the practice hours, and the playground — will be admirably situated to make character impressions. What more could be desired as to period? Earlier were of little use, and later of no use. Almost the whole formative period (I embrace, of course, from kindergarten to professional and technical school) is covered with the network of these influences. More waking time is spent under them by this nascent immortality, this potter's clay, this shooting-twig life, than under most other influences combined. The modern school idea, taken by and large, is immensely aggressive, and there are not wanting those who think that it creeps slowly toward Plato's *Ideal Republic* suggestion of stealing the children entirely and giving them over to the school-teachers. (See papers at Basel Evangelical Alliance in 1879.) These ceaseless hammer-strokes fall on metal thin enough to be battered into any shape the hammer will give it, and hard enough to retain the embossment forever. These influences in such a situation of things must either make character or spoil the material. The opportunities are boundless, and the responsibility is incalculable when you remember that, ere that handling ceases, the plasticity has gone forever!

The time at which we work — common as the thought is — is the thing that underlies both our opportunity and our responsibility. We are carving in stone like that strange western variety which can be wrought with hand-saws and chisels when first quarried, but once built hardens like granite. Character-making lies pre-eminently in their domain whose work determines the future by oversweeping the present. What! fellow-teachers! No opportunities to make character between three and twenty-three? Then has spring no power to rule the summer's blossoming or to fructify the autumn.

2. A step closer, and we discover that the mere submission of this material to general methods must exercise an immense influence upon character. The school and college are the apostles of the common life. The toning down and subduing effects of the painter's blending brush all come this way. Here false individualism is checked, and the larger life is taught as it cannot be elsewhere. School and college life, as differing from the narrower life of home, has some lines of character to cultivate that are peculiarly its own, and without which a symmetrical character is hardly conceivable. Children and youth are sent to school and college for this very class of effects, just as smaller castings are put into boxes in Pittsburgh machine-shops and rolled about to knock the rough edges off. School and college life gives the first principles for social life, and furnishes the stepping-stones to much that lies farthest on in perfecting character.

There is no danger here, either, to a true individuality. The general methods are modified by special traits — as the one rain is absorbed by each plant thru the soil and atmosphere — according to its own nature. Variety is not destroyed, while a certain healthy uniformity is secured. There is only a just correction of a false individualism. It cannot but be that the submitting of each student to the same general methods will have a powerful effect in establishing general standards of right, in removing effects of injudicious parental partialities, and in enforcing respect for all who live under the same regulations. No longer is John mamma's darling, or papa's prospective candidate for president, but simply No. 79 of room No. 8; or A 1st, or B 2d. Here is the beginning of much more than is easily seen at first glance. Here is the way to the "moral unity" which has been such a desideratum in the recent French educational discussions and changes. Here is that force which makes so decidedly, both in school and army, against junkerdom and aristocracy in Germany. Even great traits of national character come hereout. Certainly the teacher who sits beside this polishing barrel and by no crank turning, but by faithful administration, and even individual inspection, seeks to make the most of this power committed to him, is in a "coign of vantage" for character-making. It would be simple stupidity to deny this.

We may well add, then, the effect of general methods to the opportunities given us by the peculiar state of the material presented for manipulation. General methods are not mere economies; they are like the military methods which are essential to the safety and *morale* of the army and condition the military virtues.

3. And when we look more narrowly into the very subjects of study with which we are disposed to think the time is so exclusively to be spent as to preclude the moral work desired, we shall find that they possess character-making power in no inferior degree.

Let me note again, before entering upon this point, an opinion of one whose opinion I must always respect. Professor Gordy has said that "the Herbartian doctrine that the school course may be made a means of revealing moral ideas, and consequently a means of moral training, is not only false but pernicious." Let me put beside this that of a teacher in the Cincinnati Central High School, Professor Bishop, I think: "The exertion of moral force must find place in every recitation. Character-building is the real object. . . . . The ethical element must not be absent from anything taught. The teachers are ready and willing to make a noble response to this demand that they give greater prominence to the ethical element."

(1) First and chief among the subjects of study we must think of the philosophies, mental and moral, coming in their own time and way. That which teaches self-knowledge cannot fail to teach something of self-control. That which tells us what we ought to do must certainly bear firmly upon what ought to be. He is put into the peristyle of character's temple who is taught to reflect perseveringly upon the laws and activities of his own being. You have read, perhaps, President Gilman's admirable plea for philosophy as a force in this direction. Says he:

> It is by the study of the history of opinions, by the scrutiny of mental phenomena, and by the discussion of ethical principles, that religious and moral character is to be developed. . . . . The hours of reflection are redeemed from barrenness when they are pervaded by the perennial currents which flow from the lofty heights of philosophy and religion. . . . . Above other educational subjects in importance, stands philosophy, the exercise of reason upon those manifest and perplexing problems of existence which are as old as humanity and as new as the nineteenth century. For its place in education no substitute need apply. (*North American Review*, 1883, pp. 536, 537.)

And that which is true of other philosophy must certainly be true *a fortiori* of ethics. Can that be less than a powerful aid to a sincere teacher in making impressions for good that shall be as lasting as they are profound and accurate? To have the ground of morality fixed; to have the history of the world's progress and failures in morals described; and to have its relation to God (and God manifest in humanity) settled; to know something of the great executive, the will, and something of the philosophy of motive — all this (and there is more in ethics) must help

those whose ambition it is to teach well. And he only teaches well who inculcates the right as the choicest of all knowledge, and the doing of it as the noblest possibility of our nature.

Allow me to recall a word from Professor Halleck's valuable paper:

> Observation of children has certainly contributed to the science of education something in regard to the teaching of morality. Such observation has shown that those who try to teach morality by word of mouth waste their efforts. Morality concerns itself with action alone. Where there is no action there can be no morality. Children of ten receive more training in both thought and morals from their own games than from books.

But I beg leave to observe on this whole doctrine that there is nothing in the world which is so naturally and necessarily taught in the form of precept—"by word of mouth"—as morality. To this agrees our conscience with its categorical imperative. To this agrees the moral code of Sinai; and equally well its compression into two great commands to love. Moreover, we know that moral nature comes before moral action, and can be cultivated. The illustration only proved that some of the children on the playground had been well taught previously. And let me venture to put against this opinion that of Superintendent F. Louis Soldan, whose absence we all regret. As against the idea that training in moral character must be by concrete instances alone, he is reported as

> opposed to the doctrine that you must not give an order to a little child without a lengthy explanation; simply doing makes morality a part of the child's being tending to habit. Silence, punctuality, regularity in attendance, have not much force, but they are forcible when they lead to purpose. Every school should be a source of purposes, the final end of which is morality as found in the institutions of man. *Ethical lessons* are given once a week in our schools, in place of the language lessons in the lower eight grades. These are told or given in adapted literature. They cover two points: rights of other children; duty to home and parents. The teachers have primary *texts on ethics*, to be able to present the work in an orderly way.

(2) And what of the classics? Were they not of old time called the "humanities," because they civilized people? And at this point of their influence they scarcely exceed the similar power of modern languages. What a broadening of consciousness as a whole race—experience flows into the mind and acquires a new language! How can we avoid the culture of our characters when we come by patient labor and minute study (the very nature of the process heightening the result) into sympathy with the classics in which the writers have expressed and enshrined their own characters? Learning thought we learn to think; studying models in literature we are drawn to imitation in inner and outer life.

(3) Then there is the history. Magnificent field for character-making, because the largest field of display for character already made! What is history but the play of individual, and occasionally of national, character? Without this element it is a dumb pageant, as gaudy and as empty as a Punch and Judy show—and much less amusing. How can

history be taught without the sharpest analysis of motive and keenest scrutiny of conduct? How can the "world history" be the "world judgment" (according to Schiller's fine saying), unless taught as a tournament of character? And how can you teach it so and not *make* character?

(4) Then comes politics, or civics. It is erected upon history, but deals with history in the civic and national plane. Necessarily dignified is it by the numbers in view, the permanency of its results, the width of its areas, and the sweep of its inductions. Lofty is the true political effect in character. *Here* is the birthplace of that intelligent patriotism we are all so anxious to create. Nothing can lie so near the interest of the state as the study of civics, because here all the fundamental traits of character are shown to be the very foundation stones of the state. The universal inquiry, "What makes the state?" can meet only one universal reply: "Men of opinion and a will; men whom the spoils of office cannot buy." Who can teach the constitution of the United States, with its proper historical setting, and not teach that? The teaching of political science (civics in all stages) must be followed by a conviction of the citizen's responsibility, a fine sense of social honor, and a strong sentiment in behalf of political purity, or it has been badly done. A product of this kind is the imperative demand of our times. "If the colleges and schools and public lectures and the press do not bring to the front a superior class of young men, having a superior standard of honor, they do not deserve to be praised for aught that they do for the body politic. Unless there is a more exalted code and creep of political ethics, practically and potentially introduced, there will be great disasters come upon the republic ere many years roll around. Our severest trials are yet to come." (From a metropolitan journal.) Can any teacher doubt whether character is the demand of the country? Hear Cowper's lamentation just after his eulogy of English freedom:

> Do I forebode impossible events? . . . .
> Heaven grant I may;
> But the age of virtuous politics is past, ...
> *For when was public virtue to be found*
> *Where private was not?*

In teaching civics, can any intelligent teacher lose sight of the commanding motive that our whole magnificent system of free education is a moving evidence of the *love* the state has for its children? Can he help inserting here the noble *ideal* which is so necessary to elevate the actual? What a glorious opportunity to teach all who receive this education to cherish the deepest and most affectionate respect for their commonwealth and country, and for the laws and honor and good name of all the institutions of both! What is the best gift the schools can give

the country? Beyond all question it is: a generation of character. Hear Lowell:

> You who hold dear this self-conceived ideal,
> Whose faith and works alone can make it real;
> Bring all your fairest gifts to deck her shrine,
> Who lifts our lives away from mine and thine,
> And feeds them at the core with manhood more divine.
> . . . . When all have done their utmost, surely he
> Hath given the best who gives a *character*
> Erect and constant, which nor any shock
> Of loosened elements, nor the forceful sea
> Of flowing or of ebbing fates, can stir
> From its deep bases in the living rock
> Of ancient Manhood's sweet security.

There, sirs! even poetic insight will never go beyond this high conception of our greatest American author; and to realize that character on the civic side is our duty and privilege while we teach civics.

(5) Then think of the character-making power of literature. Fiction is widest here; and in how many ways the characters of fiction are carried into our educational life thru allusions, recitations, literary references, etc.! I believe too much use is made of it; and any use must be powerful, considering the vivid imagination of youth. Then come the essayists. How many of them deal with character and teach us to be critics of it, whether we will or not—all of them, indeed, that are worth using as educational material. The literature of our "readers" in school life sets the tone of the moral thinking and feeling of each generation. Let me make the people's readers rather, even, than their songs! And remember that, in the literary exercises we require thruout the whole process of an education, we are forming the power to have "opinions and a will"—i. e., to think sharply and feel deeply about that of which we think, as well as the power to express thought and feeling. What an amazing power is this that the pupil is expected to have and express correct moral ideas and to admire and praise only the virtues! How far-reaching the implication of such an expectancy! Even in elocution one must be taught to feel and express genuine sentiments. "In a certain sense, training toward naturalness is moral training of a high order. It is inculcating honesty." (Marg. T. Sutherland, *Ohio Educational Monthly*, September, 1888, p. 448.)

(6) Even those studies which may be classed under the general title æsthetics will be found fruitful in character-making power. Can anyone doubt that the training of the more delicate perceptions of the senses, and the opening thus of large areas to the otherwise insensitive and unperceiving soul, is a great general force in raising those to be educated to a plane higher than the coarser instincts? Could we not reform the world easier if there were no low tastes to be encountered? Is it not

certain that music and art refine and elevate, when not intermingled with extraneous and interrupting tendencies? Who fails to see that art is one of the grandest teachers of heroism? Storied faces awaken the latent high ambition of generous youth—as the monuments in the Ceramicus would not let Themistocles sleep. Banish all that is merely frivolous in music and all that is impure in art, and see how inspiring and ennobling they will become. Handicapped as they now are, besmeared with the flesh and besmirched with sin as they are, yet how much of every larger and fuller life comes in thru these blessed eye and ear gates, and how thrilling the contact of absorbing soul and creative genius all along the glowing lines! Oh, for the day when the full educational powers of the æsthetic —drawn away from every ridiculous and demeaning association—shall be developed! And the time will come when the finer and more sensitive lines of character will be as much expected from æsthetic culture as the solid buttresses of conviction and will are now expected from philosophy and ethics.

(7) And surely there can be no doubt about the sturdy elements of character toward which mathematics forces us. If philosophy stimulates longing to be, and classical literature softens by elevated intercourse with lofty minds, then mathematics may claim to play spinal column to this order of things. See its rare power to concentrate attention and teach self-control; to clear the mental vision and thus prevent confusion of moral distinctions; to train the mind to keen perceptions of the subtle links of sustained reasoning, and thus prepare it for applying great principles to smaller incidents; to strengthen the judgment, and thus steady the man's practice whose principles are right. Nothing can give certainty and definiteness to all vital operations like mathematics.

(8) And, of course, in this day we cannot forget natural science. That has a no less honorable place. From the beginning it illuminates man's dwelling place, and man can never be the same when he dwells in light. How marvelously science shows us that, below us and above us, within us and far beyond us, which makes the world too sacred a place either for sin or trifling! How dares a man be lazy in a world where everything from a glacier to the wing of a humming-bird is busy! How can a man be selfish where everything, from his own body to the sun, is incessantly imparting itself to something else? I make no doubt that Spencer is right (tho by no means original) in the claim (*Education*, p. 88) that science "cultivates the judgment, and stimulates a just spirit of independence, and awakens perseverance, and is a powerful aid to sincerity." I am ready to say with Huxley that it tends to produce "honest receptivity and a willingness to abandon all preconceived notions, if they contradict the truth." One of our own college presidents (Finley) has said that 'The chief value of science teaching is that it is a training in telling the

truth." Here is the place to give credit to that best possible definition of education (from the side of agnosticism) given by Huxley: "What I mean by an education is learning the rules of this mighty game (that which nature, unseen, but just and patient, wages with us). In other words, education is the instruction of the intellect in the laws of nature and the fashioning of the affections and of the will into harmony with those laws." But "fashioning the affections and the will" is just character-making. Indeed, there is a cultivation of all the more delicate and refined feelings inseparable from education in physical science (if there be no untoward or contrary influence from without to mar the impression). Humility comes by seeing the greatness and intricacy of nature. Every object becomes so much more to the scientist that his world is not only larger but infinitely fuller than his to whom "a yellow primrose a primrose is, and nothing more." Majesty beams upon him in all the greater movements, and quick interest gleams out for him from every petal of the flower and even every scale of the fish. How can a little man help being humble in the big world, as science discloses it? Reverence for nature, for man as a distinguished fraction of nature, and for God as the author of nature, must increase as the knowledge increases (unless again some exterior influence or moral disturbance interfere). The higher emotions are excited by all the dealing with natural marvels, and wonder leads to adoration, and adoration is kin to purity. Does anyone doubt at all that, if scientific recreations ever could become universal, they would banish the theater and close the saloon, and they might even civilize football?

The attainment of humility by wrestling with the facts of science and the generalizations of intellectual giants is both possible and valuable. No man ought to come thru a course like that of our high schools without being able to say a hearty and intellectual "amen" to the apostolic dictum: "He that thinketh he knoweth anything, knoweth nothing yet as he ought to know." The student who goes out without having learned humility is sure to expose raw surfaces, and will be punished accordingly.

(9) And now appear the character-making elements in the new branch of the effects of alcohol. We all know that they are not physical only, not mental only, but moral. And we shall get the very opportunity to teach the moral lesson against intemperance by beginning with the physical effects and showing where these terminate in moral wreck. Admirable here are Miss Willard's words: "The geography of character is a branch sure to be taught some day in the public schools. But character is bounded on the north by sobriety, on the east by integrity, on the west by industry, and on the south by gentleness." And then she triumphantly shows that sobriety is the condition of the other three. Teach that.

(10) Sociology. And what of sociology—the coming science which shall be (when it comes) a *scientia scientiarum*, and which (while it is coming) is tinging everything and subordinating everything (even to pure mathematics)? How can that be taught apart from the noblest life lessons? Its very texture is moral, because it studies moral beings in their moral relations, and religious beings in their religious relations. Its first questions (and its last ones) are about human duties. That "no man liveth and no man dieth to himself;" that "our neighbors" must be loved as we love ourselves; that we must do good where we would receive good; that justice is close akin to generosity, and generosity to self-sacrifice, and self-sacrifice to piety—are its primal conceptions. You cannot teach it and not form character. One only needs to refer to Professor Mark Baldwin's recent volume on *Mental Development in Social and Ethical Interpretations* to see how thoroly interplicated the individual and society must be. Whether, therefore, your morality be natural or revealed, you must teach it as the child develops into the man, and as the man prepares to take his place among other men. If you can make character at all, it is in connection with such considerations. The same conclusion is reached by way of Vincent's *The Social Mind and Education*. "When the sciences are called upon to give a teleological reason for their existence, they must give a social object as a reason for their being. . . . . Social philosophy is to be put at the apex of all science, and an ethical value is to be assigned it, rather than a logical value." (Hyslop's review of Vincent.) It is plain that the putting together of *The Social Mind and Education* shows a wider solidarity-consciousness than was ever before experienced in the world's history. The social side of character and conduct are coming into ever greater and greater prominence. "Actions which once affected no one but the subject of them, or were thought not to do so, are now thought to be necessary incidents in the weal and woe of our neighbors, and are cataloged as social instead of individual" (Hyslop). What an opportunity, then, as well as a responsibility! No wonder it is proposed to lay out a curriculum making the fourth and highest class of subjects to consist of the social and ethical sciences. How impossible to teach with this in view all along the course and not make character!

For the training to politeness (which is a very positive social virtue, and, when genuine, is thoroly altruistic), which is needed by pupils of all classes, our schools are full of opportunities. Half their pleasure and their order and good-natured atmosphere are dependent on this. The polite person treats others as tho they were "perfectly ideal persons." "Politeness is only the form of altruism. Morality and religion are the substance of it" (says Harris in comment upon Rosenkranz). Every teaching of politeness is full of social virtue, and builds moral

character of a high order, and that on a religious basis. In this matter of teaching the social virtues the school is supreme. The home is too limited; the church is also too limited, and besides has special spiritual duty; the law comes too late for full effect, tho operative in a sense all the way thru. *The school* is the center of power for the propagation of the social virtues. Trust can be taught here, largely and constantly, and in ever-widening circles. Distrust can be taught, too, as a matter of caution and watchfulness, and is equally necessary — but covers a small area. Common methods make common human nature precious in the sight of all who pass under them. Democratic regard for all merges into the deeper sentiment of honoring all. The only point where our social classes can be woven together is in our public-school classes. Here we have them as the sailor has the end of the rope he would splice — frayed out in the strands of youth that go to make up the social cords. Nothing but the schools can give us solidarity.

Thus much, then, for the subjects of study as furnishing opportunities to the teacher desirous to form character. Out of each and all of them — and out of every particular under the general classification, philosophical, classical, mathematical, scientific, æsthetic, historical, sociological — spring numberless appeals to judgment and provocatives of feeling; and in all of them principles are to be assumed and appealed to, or elaborated and established, which guide in opinion and conduct. Can it be that from third year to twenty-third pupils can be kept in living and real contact with such subjects without in all probability having all great points in life and belief and character brought before them, and without, in the process as a whole, receiving very decided and ineradicable impressions?

4. It is now but a half step onward to call up those modifications of character which pupils must experience by intercourse with each other. The special directions of this discipline of interaction immediately reveal themselves. No child remains the same after the first week of school, and no graduate leaves the professional school without feeling the touch of those he has been nearest to. The good will acquire patience, will learn to exercise consideration, will grow in respect for talent, will increase in sympathy, and will be sensible of a rising desire to excel. The bad, as everywhere else, will either approximate the good, or go the other way and finally go out. One or the other result, and in various degrees, is sure to be discovered. Sometimes we fear measles and other things; but moral contacts in school life are a deal more important because continuous and often without visible external symptoms.

There are numberless ways for the good influences to become operative. The playground and the gymnasium show finely how the physical and the moral edges intersect. Here and in the military drill and organi-

zation there is a school of character. It is here that pupils learn to despise indolence. Here they discover that enthusiasm is indispensable, but must be restrained and tempered by judgment and aided by patiently acquired skill. Here the boys learn to take hold and do things. Here, too, one must be scrupulously fair to every fellow-contestant or be black-balled in the severe but honest public sentiment of the little community. Honest sweat is seen to be a condition of high health, and that again is conditioned upon a total relinquishment of self-dandling. Here, too, is learned that sovereign lesson that healthy bodies are most likely to be holy ones, and that vice weakens and withers wherever it touches. How well Tom Brown at Rugby and Oxford depicts the moral education of the school and college sports!

Then in the mental gymnastics of the literary societies the same forces are exerted from a different angle. Self-possession, so near of kin to self-control, must be learned. Honest exercise of critical power, "nothing extenuating nor setting down aught in malice," is an admirable way to be forced into seeing our own faults—a very first step to symmetrical character. Here faithfulness to official and representative trusts is inculcated. Justice in weighing opinions and facts must be acquired; and fair means of dealing with opponents must be learned.

Nor is there wanting discipline of character in school and college fun; of which I have only to speak lovingly. I do not mean thieving (which is the right name for depredations on chicken fixings and melon patches), nor mischief that means misery to man or beast, nor hazing above all (that abomination of the eastern colleges which I frankly believe the western college boy wouldn't endure for a moment). No! *Not* these things, which are low and cowardly; but I mean the witty repartee, the shrewd criticism (the "anonymous box," as we used to call it, whose revelations were as free and pointed as the original "pasquinades" of Rome), and all such sore chastisements of the immature and vealy and pretentious and lackadaisical and over-sentimental. It is somewhere in most of us, and likely to be sprouting luxuriously between the last years of high school and the sophomore year of college. Of all that discipline of interaction I have only to speak lovingly. May its "tribe increase"! May the shadow never grow less of that wholesome horror of the good-natured and well-deserved ridicule of our school- and college-mates! It is the world's way of correcting faults without the sting of the world's bitterness, and applied just at the right time. He that heeds this prophylactic will escape much severer medicine by and by. And how many a man I have seen ripen under it visibly day by day—ripening as an apple does, with many blushes, and yet the fairer for it after all!

Who can tell how much of our own lives has been lived thru forces set in motion by our schoolmates? Rank is to be found among

our schoolmates by our character. Rank is to be maintained by our character. Pretension is soon shorn of its locks, and vanity fares ill, and money goes for nothing in the sharp, quick perceptions, and plump and prompt criticisms, of school life. Many — the most — are very much improved by it. And with all this — the spirit and temper and public opinion of the school — the teacher has very much to do. If teachers are quick, clear, and pronounced about moral distinctions, sensitive to meanness, and generous in approving nobleness, that public opinion will be high. If they are careless and slovenly and vacillating in these things, the tone will set itself on some lower key; and if they themselves be mean, unreliable, selfish, and bad, the tone will go lower still. Here is opportunity of the grandest description. The possibility of determining the result of the influences which the scholars exert upon each other presents an object of most eager ambition, and of most holy desire, to every real teacher.

5. Pass now to the actual intellectual exertions of the scholar as a school of character. Nothing can be clearer. Not only does character appear in the intellectual palæstra, but it is made there. Within the circle of these strivings the pupil must acquire (as conditions of the slightest success) something of four great virtues: self-control, determined purpose, patience, and perseverance. The very brightest faculties cannot dispense with these without ending where young Sir Tristam Fickle did in the rebuke of the older Fickle: "Don't talk to me of versatility; let me see a little steadiness." This discipline of exertion is toward mental integrity (that superb grace of "truth in work" about which Ruskin so justly raves). It is toward nervous vigor and solid backbone and thoro manliness in attacking difficult things. It is directly in the line of loyal obedience to an ideal of perfection. This highest of forces in character-making must be cultivated daily and hourly in every school where there is a teacher that is anything better than a stick. Morning, noon, and afternoon, ceaselessly as the falling of the light upon the page of the text-book, there fall upon the forming character the motives and appeals (higher and lower) which would move him in the direction of these four capital traits: self-control, determined purpose, patience, and perseverance. These are moral traits. They are signally important virtues. They are the determining virtues, because they guard against temptations on the one side and take hold upon the activities of life on the other. They have the grip of a clinched nail. You cannot break a man's hold on a worthy thing, who has been trained in the schoolroom to these grand characteristics. And these are virtues which can only come in and by work, and may come, certainly, as well by the work of the school as by any other work. Nay! That is only half the truth. The teacher's business is to see that they do come in and by the school

work, so that the workers shall not only be able to handle arithmetic well, but shall be trained to such habits and by such motives of faithful work that they can no more fail so to work as men and women than they could fail in simple multiplication. Why not? Do we all ridicule the idea of calling that education which leaves the nerveless youth at the end of it with only the knowledge of his books, and no mental power to work independently on new materials? Then let us also ridicule that style of education which has kept a child at work from three to twenty-three without even inducting him into the great working virtues, and supplying him with an unfailing certain reserve of workful character.

And as the pupils work, the teacher's great opportunity evolves. Now is the time to teach *why* work is to be done at all; now is the time to inculcate an honest shame at any kind of shambling and shamming; now is the time to make apparent the nobler motives to study which shall become in the end regnant motives to the noblest living; now is the time to increase ardor while steadying it, and to help the scholar taste the just rewards of diligence without being intoxicated by them. There is, in fact, scarcely a limit to the teacher's influence at this point. To what cheerful resoluteness, to what indomitable pluck, to what persistency of purpose, to what repeated triumphs of patience, may not a patient and sensitive teacher help a struggling student! And what so valuable a life-possession as these virtues! Even should the lacunæ left in his information be many, and the mists enveloping the calculus thick, and his construing power for Greek be feeble—the youth that goes out to life armed with these virtues will as surely succeed as the sun will rise. Effort, well-directed and sustained effort, is almost the sole condition of success. What can, by any possibility, be of more importance than the training of a generation to the working virtues? Cannot a teacher teach that every day and between the lines of every lesson? How can an earnest teacher help teaching it? Next to energy, persistence is a life force, and stick-to-itiveness is the cardinal virtue of the schoolroom; continued even occasionally over recess hours toward the setting sun, when the weary teacher would rather stick to something else. The life of thousands fails for want of persistence. What joy of exertion and habits of industry may not be taught! Intellectual indolence provides a "primrose path to stagnant pools, to an Arcadia of thistles, and a paradise of mud." But the faithful, stimulative teacher keeps the boys and girls out of the mud. What absolute self-control may be developed by study—especially in that valuable power, concentration! The temptations to superficiality and discursiveness and general molluscousness are thrown around every student. There are so many ways of getting on in things without getting to the bottom of anything. And there are so many things, and a general acquaintance with the merest surface of a

multitude is so much esteemed among men, that it becomes one of the noblest offices of the teacher to counteract the temptation and the tendency, and to teach self-control, selection, and concentration. How easily a boy can be made a botanist who sees amid a millionfold forest only the species he is studying! Impulse is made less and less the master, and selection becomes more and more easy.

"Mark," says Spencer, "the importance of the moral culture which this constant self-control involves. Courage in attacking difficulties, patient concentration of the attention, perseverance thru failures — these are the characteristics which after-life especially requires, and these are characteristics which this system of making the mind work for its food specially produces."

See, then, the glory of the teacher's opportunities in this direction. Incidental to, but inseparable from, every task of the schoolroom there is the possible culture of those very traits which are most desirable in the future citizen, the educated artisan, the professional man, or even in the politician, or that, somewhat as yet undefined, but certainly glorious creature, the "coming woman." We must all agree that it is not the knowledge of the three R's that comforts the world with the hope of ideal inhabitants, but the certainty that the generations can be educated into doing the work appointed them in a truthful, vigorous, thoughtful, patient, and persistent way. Not for one class, but for all classes, the world is a work-a-day world, and they only deserve its sabbaths who do their tasks well and to the end with all the power there is in them. Therefore the guide and director and stimulator of the intellectual exertions, by which alone the working virtues can be learned, stands very, very close to the best of the world. Can such opportunities be overlooked or forgotten? The very comfort of the teacher urges to this education in the working virtues. And they who come later in the course are intensely obliged to those who hand along the line from the earlier school life a generation highly developed in these virtues. And the world, to prepare for which is our duty and privilege, will be the more obliged to us all for every additional increment of character of this kind which we impart to those we pass under our care. And, most of all, those whom we train to right methods and motives of exertion and to character that cannot but work well and easily, will rise up and call us blessed.

6. The discipline of school life no one will be disposed to deny a place in character-making thru various methods. It has a flavor of authority, but relies largely upon conscience and honor, and this brings at once to the front the real protectors of character for the lifetime. It sets the currents of self-inspection and self-judging flowing from the soul into action constantly, and thus, when the standard is pure,

secures the moral health. In school discipline how great the teacher's encouragement becomes!

> "Friend call me good: paint the fair picture still,
> *I shall grow like it:* with an earnest will
> I'll copy the fair draught in every line
> From your dear hand, till I have made it mine."

The end and aim of discipline is not repressive, but educative. Studying from real motives and acting right from conscience are the ideals, and these cannot but end in a wise and cautious, but determined independence. This cautious independence will certainly be the fruit of faithful study under the direction of superior minds; for the fresh contact of real, good, sound heads and hearts with the old, old subjects is always striking out new sparks (as any honest teacher will tell you), and the individuality of each class is marked; while, on the other hand, the prompt and frequent corrections of false conclusions and of hasty generalizations and rash judgments teach to make haste slowly. There are no better opportunities in life for such attainments.

The school discipline teaches respect for others, promotes habits of self-restraint and order, demands self-recollection and thoughtfulness, notes and forgives, and then notes and punishes a wrong; and thus becomes an admirable force to character.

The discipline of college authorities is, of course, graver, but no less effective in its place. It represents to nascent character the far-away dread which the little-used rod had in the well-ordered family, and the public laws and prisons are to have in after-life. But there it stands, and now and then (sad-faced and slow-paced, reluctant, but firm) it steps out of concealment, and a blow falls upon the guilty; the hush when the excitement is over that follows genuine and wise discipline is proof of its permanent power. And with the really wayward how healthful and strong is that mingling of parental care in the faculty, leaning back upon parental confidence in the family, and calling for the exercise in both of all that is deepest and truest in the best hearts when they deal with erring tendencies in the young!

I do not believe in the average evil tendencies of school and college life; but up to and beyond the average, when there is true-hearted and wise discipline, the school and the college make their men as well as teach them. Discipline in the school helps to fit future parents for their disciplinary functions in the nursery and home. How easy to learn the lessons now of self-control, of correcting in love, of generous approval; of judicious over-looking; of thoro impartiality and skillful adjustment of penalty to the offense, so as to make the offense (and not the authority) the creator of the sufferings; of wise variation of general rules for special temptations, etc.! It is not too much to say at this point that

a race of perfect teachers would soon make a race of parents far better able to deal with the complicated task of parental government. To test the substantial unity between the two departments of life, ask yourselves when, if ever, you saw a mother who had been a school-teacher fail of being a good one. And let any parents here recall how often in the discipline of home the looks and tones and regrets and loving firmness of the best teachers of your own youth came back for guidance and imitation. The discipline of the schoolroom, as it is, mightily helps to save the nation from anarchy!

7. Scarcely do we need to claim character-making power for the daily intercourse of pupils and teachers in the class-room. Here we have the very thing — we have character making character. The opportunities are numberless, if they are but fairly recognized, to freight each day's intercourse with this deeper interest, and make them all subservient to moral development. Character in the teacher must be tied upon the need of it in the pupil. Difficult! Certainly; but so is everything good in this wicked world. And the difficulty can be overcome. The knot intertwining two characters must be done by shreds, as the sailors splice. Thus—

(1) By an occasional and dextrous questioning.

(2) By avoiding the appearance of considering it a task.

(3) By finding ways out of incidents into principles, and from principles into Scripture, and up to God.

(4) By gentle but constant stimulus to higher views and efforts at grander attainments. Push them up in the ascent. "*En avant, Messieurs!*"

(5) By intimate sympathy with the good and true in history. The teacher's love for the noble must be such as to show that character is more than station or wealth. Toadyism or tuft-hunting is fearful in a teacher. He must be a living example of how false Pope's lines are:

> 'Tis from high life, high character is drawn,
> A saint in crape is twice a saint in lawn.

How easily he can show, on the other hand, that many men are geodes — rough outside, sparkling crystal within! How easily a teacher's love of liberty becomes evident, and his love of purity, and of the heroic, etc.! His own character will tell as he selects and emphasizes particular traits, from every example given, and especially as he praises or blames.

(6) The teacher is likely to give the ideal conception of character to the pupil in traits and in symmetry, in part and whole. And this cannot but be of the first importance. A judgment *in thesi* carries often the greatest weight when the actual case occurs beyond the teacher's vision.

(7) The teacher's own character must show enthusiasm for character. Thus it shall win to the true view of life as against mammonism. "Every man is willing," says Ruskin, "to be a bedizened corpse (after the Syc-

thian custom) who desires to advance in life without knowing what life is; who means that he is to get only more horses and more footmen, and more fortune and more public honor, and not more personal soul! He only is advancing in life whose heart is getting softer, whose blood warmer, whose brain quicker, whose spirit is entering into living peace. . . . . And the men who have this life in them are the true lords and kings of the earth—they and they only."

(8) The education of conscience in the intercourse of teacher and pupil is unavoidable, and is a most important element. This is to be done both by conduct and by instruction. Much of the success of the best teachers depends upon their skill in educating the conscience. For thus they secure the greatest amount of work, with the least friction, and the most love! The atmosphere of truth and sincerity in a school, coming from the teacher and visible in all the arrangements, is the very matrix of everything good in character.

Perhaps, then, the greatest power of all is found in the insensible but constant, the unmentioned but powerful, force of the teacher's own character in forming the pupil. The self-control, the patience, the entire sincerity and truthfulness, the noble aspirations, the strict justice, the proved impartiality to poor and rich, smart and dull, as they are visible in the teacher's conduct, make the deepest impression of all. There is no sphere that calls for more of character than the schoolroom. Everything combines to make the teacher's character impressive. He comes to a mind in its best frame. His (or her) mental power seems that of a mental giant to the tyro at picking out crabbed sentences, and crocheting the thread of argument into a demonstration, or picking up by bits the broken sentences and sums. The teacher is next the parent, and sometimes higher, in the child's reverence, because we all (and always) respect power. Many a child's character is corrected at school, which would have been ruined at home, by meeting a richer and fuller and nobler character in the teacher. Think of the city schools and the city shoals of children, with what all know of the home life of thousands of them. Pupils' models, teachers ought to be, and such they always are, more or less, in proportion to individual magnetism. Dean Stanley said that "the greatest of all educational difficulties, and also the solution of all educacational difficulties, was to be found in connection with the characters and capacities of those who were sent out as teachers. The deepest impressions carried from childhood into manhood were impressions not only of what had been taught, but of the manner in which the instruction had been given."

The teacher's example goes a long way down. Truth is honored. Patience is emulated. Love is returned. Reverence for God and the good is instilled. Self-control is mastered. Perseverance is taken on.

The soul of a pupil expands beside a thoroly trusted and admired teacher, as sympathetic ink comes out before the fire. Examples abound. Socrates' impression was that of an "archetypal personality." The narrative of Xenophon is "nothing but an abstract of his inward character." "His philosophy is his mode of action as an individual; his life and doctrines cannot be separated." (Schwegler's *History of Philosophy*, pp. 62, 63).

The whole modern world knows of Arnold. All the world honors Pestalozzi. New England can never forget Samuel Taylor. Ohio will always cherish McGuffey's memory and MacMaster's. Every school and college has its traditions of great teachers, impressive by character.

This it is that tells everywhere. Men find it easy to disbelieve what any man utters when they do not believe in the man. It is significant that Benjamin Franklin says of himself: "It was because of my well-known integrity of character that I had so much weight with my fellow-citizens. I was but a bad speaker, never eloquent, subject to much hesitation in my choice of words, hardly correct often in my language, and yet I generally carried my point."

The teacher represents the community as he represents the parent. He must fit the child for a place in the community; must do it by "all resources of knowledge," and "by a type of character which represents as closely as possible the highest moral progress yet attained by man." (Sulley, *Teacher's Handbook of Psychology*, p. 63.) In the transmission of character from generation to generation, where is there a more visible instrumentality than the influence exercised by the teachers of the young? Yankee character and Yankee schoolmasters left their impress all along our chain of great lakes. The Yankee schoolmistress was feared at the South so long as they feared the truth. Character is sure to evoke character. So Lowell has it:

> Be noble, and the nobleness that lies
> In other men, sleeping, but never dead,
> Will rise in majesty to meet thine own. (*Sonnet 4.*)

8. And to all these opportunities there must be added this—that thruout the school life character-making may be furthered by the use of that great store of commands and precepts and standard illustrations of character which are furnished in the Sacred Scriptures. These may not only be *read* daily, but remembered in allusions and explanations constantly. The definitions of right and wrong thence derived come to the awakening conscience with authority. The Scriptures can never be displaced as the aptest and clearest and most varied and most attractive magazine of materials ready for use in forming character. They are ethical to the core, and filled with everything we wish to realize in the youth under our care. For this reason Huxley would not tolerate their exclu-

sion from the schools of England, tho he would not admit their inspiration. Having the Bible at hand adds incalculably to the character-making power of any school.

9. And then, to close all, there must be noticed the extra-class hours of confidence and advice which the teacher's relation to the pupil makes so appropriate and so useful. Many a time a word spoken in this "coign of vantage" has saved eyes from tears and feet from falling. There can be no limit given here, and scarcely a hint needs to be given to earnest teachers, who hate mere perfunctory work. The impossible need not be expected in order to be assured that to the teacher who has understood the need of individual influence as the proper complement to common methods there will come endless opportunities, which may be used to most important results, in this out-of-school intercourse. Thus he becomes "the guide, counselor, and confidential friend" of many a one at the period of "unstable equilibrium," when such a friend cannot elsewhere be found.

Conclusion.—Ample, then, in every sense are the opportunities for the formation of character in and by the course of education. They are sufficient to supplement all other good and gracious influences, and deserve the rank which the saintly George Herbert gives them:

> Lord, with what care hast Thou begirt us round:
> Parents first season us; then school-masters
> Deliver us to law; then send us bound
> To rules of reason, holy messengers,
> Pulpits and Sundays.

A moment's recapitulation must certify this amplitude. We have the best *time* and the power of general *methods* with which to begin. Every *subject* of study has its own molding power ready to be used. The interaction of pupils is an unceasing influence which may be largely directed for the highest good. The scholar's own mental exertions give us the opportunity to instill the great working virtues, and inner, vital action is begun. The discipline of school life aids, by outer action, its own pressure. Then follows the daily superaction of the teacher's character. This can be made more effective by appeal to the authority and love of God as shown in his word. And all may be aided by an out-of-school intercourse of special value.

Here are opportunities enough to mellow and mold and save where other good influences have been deficient. Enough to send out purest streams with every class that shall everywhere make glad the moral wastes of our day. Much is done, and more may be done. It is impossible for me to think of any really desirable trait of which the attainment may not be begun, and to which there is lacking some incitement, within the circle of school and college life. What a list of them!

Courage,	Honor,	Decision,	Self-reliance,
Sympathy,	Reverence,	Ambition,	Hopefulness,
Love,	Self-respect,	Conscientiousness,	Truthfulness.
Heroism,	Humility,		

And as long a list of faults of character may be corrected:

Vanity, Fickleness, Incompleteness, Dishonesty,
Laziness, Superficiality, Low ideals, Feebleness of purpose, etc.

So sacred and high are the possibilities when you consider things in their essence and reality, and not in their forms, that I can scarcely draw the line between the day school and the Sunday school in the mission of making character; and the teacher becomes at least an associate pastor. (Such sympathetic relations are, in truth, found in Protestant Germany as well as in Catholic France.) Who has a broader field, or rarer seed, or larger opportunities to sow? And how much of the harvest that is sometimes counted (in the short-sightedness that sees only the last instrumentality) to the Sunday-school teacher or the pastor is set down above (where the end and the beginning are never separated) to the care and drill and conscience and character of the faithful day-school teacher?

But with such opportunities, what foes we have to encounter! Every bad social influence somewhere shows in the schoolroom. A teacher can tell whether a circus has been in town. When the skating-rink craze went over the land, some teachers said: "The rinks must close, or we must." Saloons, in their steady demoralization, pursue our youth. Tobacco and tobacco pictures are desolating. The secret diffusion of corrupt literature it is almost impossible to check. Some forms of dancing and the theater are known to demoralize. And all go straight to the youth. All expect their victims there, and, alas! find them there. No superintendent can look thru the ranks without seeing the touch of all these things, sometimes complicated by heredity and often so reinforced by circumstances that escape seems next to impossible.

With the opportunity there comes this appeal to help against the foes. Many voices — and tender and powerful ones — are pleading. This young, innocent, fair life, so wonderful in its present, so inconceivably important in its future, utters its own plea. It says with tones that need no articulation — as the silent respirations of the babe you watch in the cradle do — "Care for me! Keep the wolves away."

Mothers and fathers come seeking your aid, with tenderest solicitude. Pastors and Sunday-school teachers come, hoping that what is done on the Sabbath will not be hindered, but helped, during the week. The state stands waiting to know the character of the generation into the hands of which all the common interests are so soon to pass. What teacher can fail to feel the tremendous responsibility which lies upon the schools? We must meet it, as it only can be met, by making the most,

thru utmost effort and attention, of the magnificent opportunities for character-building furnished in school life. Open eyes to see; intelligent effort to use; unremitting patience to wait; firm handling and firm trust in God — all will be needed, and all are demands of the situation. The duty of the state to protect the children of the public school is perfectly clear. The children are invited and compelled to come in. To allow poisoned air to come in with them, or germs of communicable disease, is criminal negligence of the 15,000,000 in our schools. Children from unclean homes should be excluded. True. And truer still for moral pollution, and true from the compassion side as well as from the prophylactic side, or the general welfare side of government. See, then, fellow-teachers, the great compact between the state and the schools. The excluding power of the school is a method of realizing our final aim. This excluding power by state law must be met within by elimination of evil and the formation of character. And certainly it is to be remembered that character is not formed nor faults corrected in a day. Stone upon stone, and, before that, blow upon blow to fit each stone for its place; one impression on another at the same place; line upon line, and precept upon precept — thus is character made. Every day something.

Nor is your character-building in school done alone by direct and intended efforts. Impressions are sometimes deepest when least observed. The unconscious deeds impress others. Omissions as well as commissions count in this reckoning. The power of a teacher lies much in the very fact that culture in character lies alongside his work rather than in it. Side-lights sometimes are best lights. Things injected penetrate deeper. Indirections are often more powerful than right lines. The bow drawn at a venture pierces between the joints of the harness. A truth just seen emerging from the facts of a lesson will take both pupil and teacher by surprise, and will therefore adhere.

Were I permitted to give counsels, they would be such as these: Invent methods to make the most of these opportunities (as you invent methods of teaching geography). Write text-books of instruction to refer to from time to time (not to absorb the spirit of the work). Write professional books on the subject. Study this matter in the institutes. Read biographies of the great educators with this in view. Guard against the American spirit of haste and over-nervousness in education, because these are destructive to character. Guard against the miserable bread-and-butter spirit which makes livelihood more than life, and the secularizing spirit which strips away the foundation of and motives to character. Labor to put this first where it really belongs. Do all you can energetically as supplying the great need of our time and country for education of the conscience. Make better men and nobler women the vividly conceived and ever more diligently pursued ideal of your whole endeavor. Breathe this purpose into the soul of each teacher, and that will find or make its own method.

We need to think much upon the nobility of the ideal we cherish when we educate to form character. It is to transmute fleeting impressions into permanent results and to make the perception of a moment the ideal of a life. It is to exalt being over seeming (the thing the world's greatest minds, from Plato to Carlyle, have striven to do). It is to construct in character an eternal reflector for the grandest truths comprehensible to man. It is to educate for God, and country, and eternity. It is to adopt Whittier's wish for his namesake, and realize it for the millions:

> No dreamer thou, but real all,
> Strong manhood crowning vigorous youth,
> Life made by duty epical
> And rhythmic with the truth.

How infinite the importance of everything connected with the moral outcome of our modern education! Its vastness and the rapidity with which it is growing vaster; its firm grasp upon all life forces and the rapidity with which its grasp is growing firmer; its *extension* over the time of man's brief life, and its *intension* as it deepens its penetration to an all-embracing command of body, mind, and soul — make the question of moral outcome supreme and even thrilling in its importance.

And the outcome will infallibly be controlled by the aim and final end proposed — so long as education is (or in proportion as it becomes) a rational process.

We need, therefore, to keep on studying our final aim in education and how we may realize it. And the greatest interest in this question does not belong to the higher education, but to the secondary and the primary. And in greater proportion it belongs to the former of these two rather than to the latter. Just here I should say in this body in which concenters representatively the general conduct of the secondary education — just here where I suppose controlling opinions to be formed by interchange and comparison of conviction and experience, *concenters the responsibility for the moral outcome of our public-school system.* It is something to give one pause, and an interval of far-sighted vision while he pauses, and an access of real awe, as he thinks of the sacredness of the teacher's trust.

Jefferson said (Jefferson who would have "Founder of the University" inscribed upon his tomb): "Were it necessary to give up either the primaries or the university, I would rather abandon the last, for it is safer to have a whole people reasonably enlightened than a few in a high state of science and the many in ignorance."

It is almost too early in the primary schools to make sure of the product, and in the colleges it is almost too late to do much more than systematize and polish the product. But here, in the great middle section of our country's training, is the place of greatest power, and therefore of greatest responsibility.

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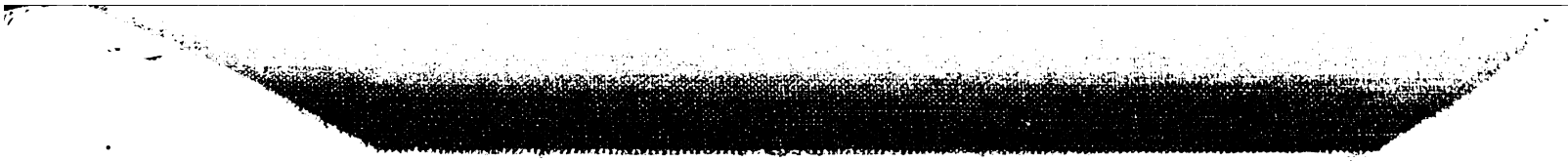

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