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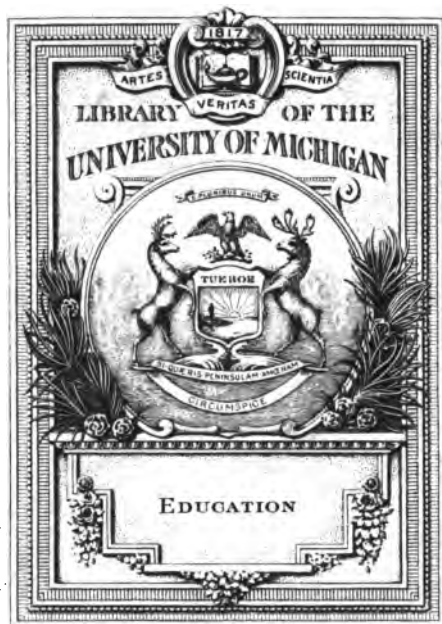
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PROCEEDINGS

OF THE

DEPARTMENT OF SUPERINTENDENCE

OF THE



NATIONAL EDUCATIONAL ASSOCIATION

AT ITS MEETING IN

JACKSONVILLE, FLA., FEBRUARY 18, 19, 20, 1896.

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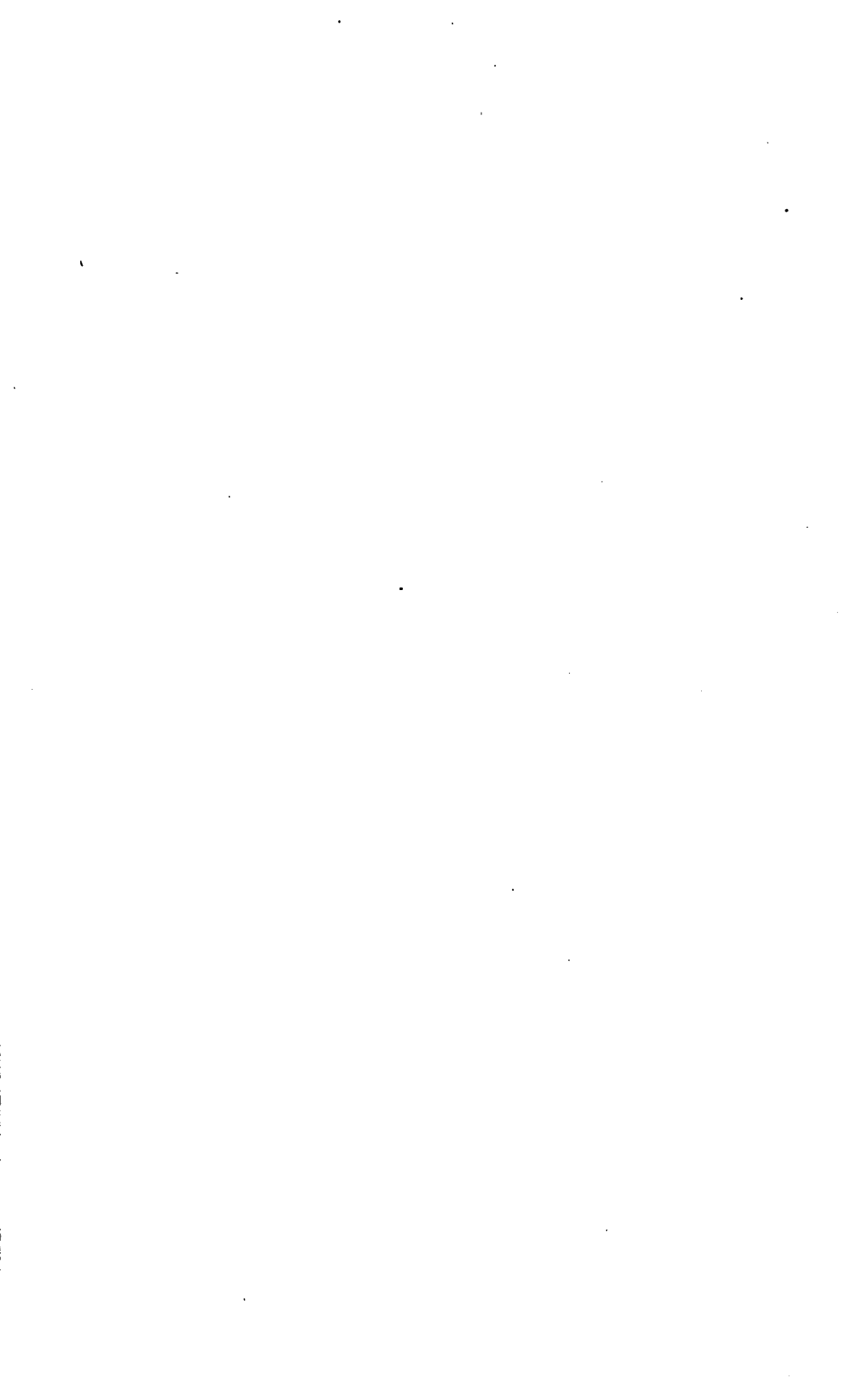
1896.



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DEPARTMENT OF SUPERINTENDENCE.

JACKSONVILLE MEETING.

SECRETARY'S MINUTES.

FIRST DAY.

MORNING SESSION.—TUESDAY, FEB. 18, 1896.

The Department of Superintendence of the National Educational Association met in annual session at Jacksonville, Fla., in the new city hall, at 9:30 o'clock. The President, Supt. L. H. Jones of Cleveland, Ohio, presided.

After an invocation by Rev. T. W. Veale, pastor of the First Presbyterian Church, the address of welcome on behalf of the City of Jacksonville was delivered by Hon. D. U. Fletcher, ex-mayor of the city.

Hon. W. N. Sheats, Superintendent of Public Instruction of Florida, followed with an address of welcome in behalf of the State Teachers' Association.

President Jones responded to the addresses in behalf of the department.

A paper on the subject, "What Is the True Function or Essence of Supervision?" was read by C. A. Babcock, Superintendent of Schools, Oil City, Pa.

Then followed a discussion of the paper by Supt. F. Trendley of Youngstown, Ohio, and by Supt. J. H. Phillips of Birmingham, Ala.

Asst. Supt. Edward C. Delano of Chicago, Ill., presented a paper on "What Is the Best Use that Can Be Made of the Grade Meeting?" This paper was discussed by Supt. H. E. Kratz of Sioux City, Iowa.

The department then adjourned.

AFTERNOON SESSION.

The session had under consideration the general topic, "How Shall the Best Schools Be Brought to the People in the Rural Districts?"

Dr. B. A. Hinsdale of the University of Michigan presented the first paper, "Some Sociological Factors in Rural Education in the United States."

Supt. Lawton B. Evans of Augusta, Ga., followed with a paper on the same subject. The interest awakened by these papers made it necessary to limit the speakers to three minutes each. Among those taking part in the discussion were W. W. Pendergast, State Superintendent of Public Instruction of Minnesota; E. B. Prettyman, State Superintendent of Schools, Maryland; Nathan C. Schaeffer, State Superintendent of Public Instruction of Pennsylvania; Supt. H. G. Weimer

of Allegheny County, Maryland; Supt. A. D. Worthington of Hartford County, Maryland; Superintendent Whitcomb of Lowell, Mass.; Henry Sabin, State Superintendent of Public Instruction of Iowa; Superintendent Bouton of Pittsfield, Mass.

The discussion was very animated. The lateness of the hour prevented all from taking part.

EVENING SESSION.

At 8 o'clock p. m. President Jones called the department to order. After announcing that at the morning session of Wednesday the Committees on Nominations and Resolutions would be made known, he introduced Dr. J. G. Schurman, President of Cornell University, who delivered an address on "The Vocation of the Teacher."

Prof. Edwin A. Alderman of the University of North Carolina followed with an address upon "The University and the State in the South."

SECOND DAY.

MORNING SESSION.—WEDNESDAY, FEB. 19, 1896.

The department was called to order by President Jones at 9:30 o'clock.

The president then announced the following committees:

COMMITTEE ON NOMINATIONS.

President C. C. Rounds, Plymouth, N. H. Prof. D. L. Kiehle, Minneapolis, Minn.
State Supt. J. M. Carlisle, Texas. Supt. E. H. Mark, Louisville, Ky.
Supt. H. P. Emerson, Buffalo, N. Y.

COMMITTEE ON RESOLUTIONS.

Supt. F. Louis Soldan, St. Louis, Mo. President Geo. H. Cliff, Philadelphia, Pa.
State Supt. E. B. Prettyman, Maryland. Supt. A. S. Whitney, East Saginaw, Mich.
Supt. A. K. Whitcomb, Lowell, Mass.

The selection of place for holding the next meeting of the department was then taken up. Prior to receiving invitations, the following resolution was offered by Supt. C. B. Gilbert of St. Paul, and carried:

Resolved, That the vote about to be taken, for a place for the meeting of this department in 1897, be merely a vote of preference, and that the final selection be left with a committee consisting of the officers of this department and the Secretary of the National Educational Association; provided, that this committee shall be guided by the vote of this body in case the city receiving a majority of the votes offers as favorable accommodations and rates as any other.

Supt. W. E. Robinson of Detroit, Mich., then extended an invitation to the department to hold its next meeting in Detroit. This was followed by an invitation from Supt. A. T. Barrett of Chattanooga, Tenn., to hold the next meeting at Chattanooga. Supt. D. K. Goss of Indianapolis, Ind., next invited the department to Indianapolis. His invitation was vigorously seconded by the Secretary of the Commercial Club of Indianapolis. The balloting gave the following results:

Indianapolis	72
Detroit	45
Chattanooga	14

The President then declared Indianapolis the choice of the department according to the terms of the resolution previously adopted.

A paper on "The Necessity for Five Coördinate Groups of Studies in the Schools" was read by Dr. W. T. Harris, United States Commissioner of Education.

Then followed a discussion of the paper by Dr. Herman T. Lukens of Clark University, Massachusetts.

Next, a paper on "What Correlation of Studies Seems Advisable and Possible in the Present State of Advancement in Teaching," was read by C. B. Gilbert, Superintendent of Schools, St. Paul, Minn.

In the absence of Supt. W. P. Burris of Bluffton, Ind., the discussion of the papers was taken up by President J. G. Schurman of Cornell University; Supt. F. L. Soldan of St. Louis; Dr. C. A. McMurry of Normal, Ill.; Dr. B. A. Hinsdale of the University of Michigan; Prof. Walter L. Hervey of the New York College of Teachers; Superintendent Gilbert, and Dr. W. T. Harris.

The last paper of the session, on "Concentration of Studies as a Means of Developing Character," was read by President Charles De Garmo of Swarthmore College, Pennsylvania.

AFTERNOON SESSION.

The session opened by the reading of a paper on "Isolation and Unification as Bases of Courses of Study," by Dr. E. E. White, ex-Superintendent of Schools of Cincinnati, Ohio.

In the absence of State Superintendent Inglis, the discussion upon this paper was opened by President Frank McMurry of Buffalo, N. Y., and Prof. Chas. McMurry of Normal, Ill.

Dr. White closed the discussion.

Then followed a paper on "Organic Relations of Studies in Human Learning," by Dr. W. N. Hailmann, Superintendent of Indian Schools, Washington, D. C.

A paper was then read by Prof. J. M. Guilliams, Principal of Normal School of Jasper, Fla.

Supt. W. S. Sutton of Houston, Tex., read a paper on "Courses of Pedagogical Study as Related to Professional Improvement in a Corps of City Teachers."

The session then adjourned.

EVENING SESSION.

Hon. J. L. M. Curry, agent of the Peabody Fund, addressed the department on "Some Educational Questions Pertaining to the New South."

THIRD DAY.

MORNING SESSION.—THURSDAY, FEB. 20, 1896.

The department was called to order by the President at 9:30 o'clock.

Miss N. Cropsey, Assistant Superintendent of Schools, Indianapolis, Ind., read a paper on "What Should the Elementary Schools Accomplish for the Child?"

The paper was discussed by Supt. F. Treudley of Youngstown, Ohio; Supt. Aaron Gove of Denver, Colo., and Superintendent Carroll of Worcester, Mass.

Then followed a paper on "What Should the High School Do for the Graduate of the Elementary Schools?" by Supt. F. Louis Soldan of St. Louis, Mo.

The same topic was discussed by President Joseph Swain of the Indiana University.

The last paper of the morning session, on "What Should the College and University Do for the High School Graduate?" was read by James H. Baker, President of the University of Colorado.

The following resolution was then introduced by Supt. W. B. Powell of Washington:

Resolved, That a committee of nine be appointed to prepare a report on methods and courses of work that will promote a vital connection between the education and physical development of the child; and that the directors of the National Educational Association be requested to appropriate a sum not exceeding \$1,000 to defray the expenses of the committee.

The resolution was laid on the table for further consideration.

Supt. F. Louis Soldan then introduced the following resolution relative to the death of Dr. Norman A. Calkins of New York:

Whereas. Since the last meeting of this department, Dr. Norman A. Calkins, the President of the Board of Trustees of the National Educational Association, has passed away, this department desires to put on record its testimony to the aid he has been to it and to the cause of education, and their recognition of the loss that has been sustained by his death.

Dr. Calkins was the Chairman of the Board of Trustees of the National Educational Association from 1886 to the time of his death, a member of the Executive Committee, and an influential adviser in the councils of this department and of the general association.

Dr. Calkins was born in Gainesville, N. Y., in 1821, and began teaching in the district schools. It was early seen that he had an unusual apprehension of the underlying principles of education. He became a valuable instructor in the teachers' institutes. He removed to New York City, and about 1860 began to publish a paper entitled the "Student and Schoolmate," the main object being to broaden the scope of study, which was then very narrow. In 1863 he was appointed an assistant superintendent of schools in New York City, which position he held until his death, Dec. 21, 1895, a period of thirty-two years.

Dr. Calkins was untiring in his efforts to find and to put in operation the best methods of education. He advocated the Pestalozzian methods, commonly called "object teaching," at a time when they were held in disfavor by the profession generally. When these methods as expounded and practiced at the Oswego Normal School were attacked before the National Educational Association, and a committee was appointed to investigate and report concerning them, Dr. Calkins, as a member of this committee, reported in favor of the Oswego methods, as being a logical outcome of Pestalozzian principles.

Dr. Calkins prepared several volumes on educational subjects; of these "Primary Object Lessons" and the "Manual of Object Teaching" had a wide circulation. All his writings show him to be a most practical and yet a most thoughtful teacher. He was held in the highest esteem by the teachers in the primary schools of New York City.

Dr. Calkins became early identified with the National Educational Association, and in 1886 was made chairman of its Board of Trustees. At the meeting held in Saratoga Springs in 1885 he was chosen as its president. He held the office of treasurer from 1883 to 1885.

He exerted a salutary influence on all he met, for he had a kind and lovable nature. This department has been the recipient of his unselfish counsels and advice ever since it was organized; be it therefore

Resolved, That we have been greatly pained to hear of the death of our beloved fellow member and associate, Dr. Norman A. Calkins, assistant superintendent of schools in New York City. We recall his long period of membership, beginning in 1866 (a life membership beginning in 1879); his uniform readiness to counsel and aid the progress of the department; his broad and sound ideas on educational matters; his charming manners and unfailing courtesy; and above all, his high Christian character and purposes. We desire to assure his bereaved family of our heartfelt sympathy. A good man has gone to his well earned reward.

This resolution was unanimously adopted by the department.

In the absence of the Chairman of the Committee on Nominations, Supt. H. P. Emerson of Buffalo, N. Y., made the following report for the committee, recommending as officers for the department for the ensuing year:

President—C. B. Gilbert, St. Paul, Minn.

First Vice President—A. B. Blodgett, Syracuse, N. Y.

Second Vice President—W. S. Sutton, Houston, Tex.

Secretary—Lawton B. Evans, Augusta, Ga.

The report of the committee was adopted.

AFTERNOON SESSION.

This session was devoted to round tables.

CITY SUPERINTENDENTS' ROUND TABLE.

City Superintendents met in the council chamber, City Hall.

Supt. A. K. Whitcomb of Lowell, Mass., acted as leader in the discussion of the following topics:

1. What methods are desirable and what have been successful in informing a community of the truth with regard to the management and control of schools?
2. How far is it practicable and desirable for a city superintendent to determine the methods of instruction in a system of city schools?
3. How can a superintendent best improve himself in his work?
4. Should the reading of the Bible be a part of the exercises in the public schools?
5. How may a city superintendent of schools best increase the efficiency of a corps of teachers?
6. How may we best develop and foster the mother element in the teacher?
7. Science work in the grades—what and how much?
8. How can incompetent teachers best be removed from a corps of city teachers?

Those taking part in the discussions were Supt. L. C. Miller, Lima, Ohio; Supt. D. L. Abbott, Macon, Ga.; Superintendent Barringer, Newark, N. J.; Supt. A. B. Blodgett, Syracuse, N. Y.; Supt. H. S. Tarbell, Providence, R. I.; Supt. H. A. Wise, Baltimore, Md.; Supt. W. H. Baker, Savannah, Ga.; Supt. W. R. Harper, Americus, Ga.; Supt. E. H. Mark, Louisville, Ky.; Superintendent Hobbs, Mount Dora, Fla.; Superintendent Griffiths, Utica, N. Y.; Supt. C. F. Carrol, Worcester, Mass.; Supt. Aaron Gove, Denver, Colo.; Supt. A. G. Lane, Chicago, Ill.; Supt. H. P. Emerson, Buffalo, N. Y.

STATE SUPERINTENDENTS' ROUND TABLE.

State Superintendents met at the Board of Trade rooms.

This meeting was presided over by Charles R. Skinner, State Superintendent of Public Instruction of New York.

The following topics were discussed:

1. Interstate recognition of state certificates and the interstate distribution of documents.
2. What consideration should enter into a plan for the equitable distribution of school money?
3. What are the essentials of successful institute work?

Those discussing these topics were State Supts. H. R. Corbett, Nebraska; A. B. Poland, New Jersey; J. Q. Emery, Wisconsin; J. M. Carlisle, Texas; O. T. Corson,

Commissioner of Education of Ohio; Mrs. A. J. Peavey, Colorado; W. W. Pendergast, Minnesota; W. N. Sheats, Florida; J. R. Kirk, Missouri; D. M. Geeting, Indiana; Professor Stout, New York.

COUNTY SUPERINTENDENTS' ROUND TABLE.

The County Superintendents met in the rooms of the Seminole Club. This meeting was in charge of County Superintendent Joel D. Mead of Duval County, Florida.

The discussions followed the line of the administration of duties belonging to the office of County Superintendent.

The following states were represented in the discussion:

Florida, Pennsylvania, Maryland, Georgia, Kentucky, and South Carolina.

NATIONAL HERBART SOCIETY.

The National Herbart Society convened in the Elks' lodgeroom, under the leadership of Dr. Chas. De Garmo, in the absence of Dr. John Dewey.

Dr. Chas. A. McMurry of Normal, Ill., opened the discussion, based upon the second supplement of the "Herbart Year Book" for 1895, considering the subject of "Interest as Related to Will," by Dr. Dewey.

Dr. Harris, Dr. Brown, Dr. White, and Superintendent Treudley participated in the discussion.

SPELLING REFORM ROUND TABLE.

The round table of "Spelling Reform" met in the parlors of the Seminole Club, led by Prof. Edward R. Shaw of the School of Pedagogy, New York, who directed the discussion along the following lines:

1. In teaching spelling, how may the necessary series of associations and memories be best established?

2. Can apperceptive methods be employed in teaching spelling?

3. Should a spelling-book be employed? or, Should the list of words be taken from the reading and science lessons?

Those entering into the discussion were Supt. C. B. Gilbert of St. Paul, Prof. Keppler of Jacksonville, and Dr. Sanford of New York.

EVENING SESSION.

The last session of the department was called to order at 8 p. m. by President Jones.

A paper on "Some Practical Results of Child Study" was read by Supt. A. S. Whitney of East Saginaw, Mich.

Then followed an address by James L. Hughes, Inspector of Schools, Toronto, Ont., on "The Influence of the Kindergarten Spirit on Higher Education."

After this address the report of the Committee on Resolutions was read by Supt. A. K. Whitcomb of Lowell, Mass., acting as Chairman in the absence of Supt. F. Louis Soldan of St. Louis.

The resolutions were adopted, and are as follows:

Resolved, That the Department of Superintendence of the National Educational Association extends to the citizens of Jacksonville, her representatives, and particularly her school officers and teachers, its thanks for the care they have bestowed upon the preparations for this meeting, and for their hospitable and cordial welcome.

The department returns its thanks to the press for the support which it has lent to the meetings by full and faithful reports of the proceedings.

To the various railroad lines, the department expresses its appreciation of the courtesies extended by the granting of reduced rates, which have facilitated a large attendance.

The department tenders its sincere thanks to its retiring officers for their labors in connection with the meeting, whose signal success is in the first place due to the care with which they prepared the program and the tact and efficiency with which they have conducted it.

The resolution of W. B. Powell was then taken from the table, and after some discussion was amended, by motion of Dr. W. N. Hailmann, to read as follows, and passed as amended:

Resolved, That a committee of three be appointed by President Jones to submit at the next annual meeting of this body a plan or plans for collecting data as to methods and courses of work pursued at different points in primary schools, with a view of promoting a vital connection between school studies and the educational development of the child.

The following committee was appointed under the above resolution:

W. N. Hallmann, Chairman; W. B. Powell, Miss N. Cropsey.

President Jones, in introducing President-elect Gilbert, spoke as follows:

Before we part, one pleasant duty remains for me to perform. I wish to introduce to you your new presiding officer, whom you have chosen to guide the future deliberations of your body. President Gilbert, it gives me great pleasure to hand you this insignia of your authority. These children of ours [pointing to the large audience] are asking you to teach them, and to you I gladly resign the pleasing task.

President Gilbert, in accepting the gavel, said:

I have been placed in two tight places in this meeting. One was when your honored leader made me a bumper between two of the heavyweights on the program,—and the other was when you called me to be your President. This is the most potent educational body in this country, if not in the world. Into its hands is given the work of shaping the educational future of the United States. When I thought of the responsibility of presiding over the deliberations of such a body of men, I was overwhelmed; but I accept the responsibility. I have sat among "these children of ours," and have been one of them. I shall still be one of them, and shall sit to learn, as before.

President Jones then declared the department adjourned.

R. E. DENFELD,
Secretary.

ADDRESS OF WELCOME.

BY HON. W. N. SHEATS, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, FLORIDA.

Mr. President; Members of the Department of Superintendence; Ladies and Gentlemen:

As the representative of the people and teachers of the state, it gives me unbounded pleasure to give you welcome to Florida.

The same cordial greeting is extended to you who have journeyed almost across the continent from north to south as to our immediate neighbors wrestling with problems and conditions similar to our own.

We come together in council to confer about matters alike dear to us, and since the country is to be what the schools shall make it, to determine how we can best secure the perpetuity of our republican institutions and render wiser and happier the people of every condition in our common country.

We admire the educational enthusiasm of our brethren from the North, expect to profit by learning their way to success in popular education, and are especially glad of the opportunity to reciprocate some of the kind treatment enjoyed at their hands while among them on occasions similar to this.

After visiting your section and learning more of your people, we have always found ourselves more in sympathy and in love with you. We now rejoice that we have been able to entice so many of you down into the far South, where we will arrange for you to come often in midwinter unless the designs of some of us fail, hoping that you may be affected by a better knowledge of the South and her people, and the peculiar problems confronting them, as we were by a better knowledge of you.

The white people of every section of our great country are proud of a common ancestry who fought side by side to leave to us the heritage of the best government the world ever saw; and it is now worthy the ambition and efforts of teachers, who are responsible for the intelligence and largely the prejudices of the next generation, to look to the protection of American institutions, and see that the sons are as united as were their fathers.

The welfare of no other race or other nationality should entice the South into any alliance detrimental to the North, nor should the North forget the Anglo-Saxon blood of the South in her efforts to promote the interest of any people under the sun.

What matters it that our immediate fathers had a family difficulty? Many families have their little dissensions, and are all the more loving when the quarrel is over.

Relying too confidently upon the work of her colleges and the old private academies, the South, it is true, lagged behind for a time in the matter of public education. This backwardness was due in part to the existence of another institution incompatible with popular education, and in part, also, to the sparseness of population.

But the cannons of civil war had hardly ceased to roar before the people, in the midst of poverty and misery which their own children and few at the North will ever comprehend, finding themselves unable to educate otherwise, began taxing themselves for the education of their own children and for that of their former slaves. They paid for schools for both races, and it was too often the case that the white boy ploughed to pay the tax while the negro boy sat in the school.

Under such conditions you could hardly expect the public school system to develop rapidly; but it delights us to inform you that "the schoolmaster is abroad in the land" to-day, and it is being invaded by an army of school teachers, whose silent yet powerful tread is shaking to the earth the walls encircling the Jericho of old prejudices and overthrowing the strongholds of error and ignorance.

The South cannot boast of the present status; but is exceedingly proud of the progress made in the past fifteen years. Our honored commissioner of education, by his address at Atlanta, now published in the proceedings of the National Educational Association of 1895, has placed the whole South under a debt of gratitude to him, which we know not how to pay, unless it be to petition the next president to retain him in the position he has filled in a most masterful way.

While extremely grateful for our part of the exposition of the facts showing the progress of the South in education. Florida is yet a little ambitious to be contrasted with the general showing that is made when she is grouped with her larger sisters south of the Ohio and extending from Virginia to Texas. It may not be known that Florida, though sparse in population and feeble in taxable resources, yet arrogates to herself leadership in her section on many important counts in common school education.

I was informed by our president that the picket line must fire their small arms quickly and fall back to make room for the unlimbering of the heavy artillery, but I believe this audience will accord me five minutes to make good the claim of Florida, by a recital of some statistics reduced to as few figures as possible. The record of the school year 1892-93, the latest date obtainable, as published in

the report of the commissioner of education, is used. Sometimes the data for Florida is taken from the report of the year 1893-94, as the report of the year previous is not full and complete. Another fact to be remembered is, that the school age of the group is reduced to the basis of five to eighteen, while that for Florida is from six to twenty-one; evidently a disadvantage in the showing, as only a small per cent over eighteen years of age go to school.

For the sake of brevity, I will merely mention the points of comparison, the average per cent made by the group of ten states, including Florida, and the average made by the latter alone. The ten states are North Carolina, South Carolina, Tennessee, Kentucky, Arkansas, Mississippi, Alabama, Georgia, Florida, and Louisiana.

The first number in every case refers to the group, the latter to Florida alone.

1. In the number of pupils enrolled in the common schools in every hundred of population the showing is 61 to 66—the latter more than Rhode Island or New Jersey, and nearly the same as Pennsylvania. Divided as to race, the showing would be 74 for the whites and 57 for the negroes. Counting the whites alone, it is five points higher than the average for the United States. If it be desired to do justice to the whites of the South, the fact must always be borne in mind that the poverty and indifference of the negro discounts all statistics on questions of merit.

2. Average attendance of pupils as compared with the enrollment is 62 to 66—the latter a small fraction larger than the average in the United States, and greater than in Connecticut, New York, or New Jersey.

3. Average length of school term in days, 87.3 to 105; that is, Florida gave her children within a fraction of eighteen days more schooling in a year than did the whole group of states.

4. Percentage of female teachers, 47.1 to 56.7. This fact may show that the children were taught more conscientiously and industriously in the latter, because a larger percentage of Florida's teachers were females.

5. On account of blanks in the reports of three of the states, it was impossible to make a just comparison of the salaries paid teachers. Suffice it to say, that the average monthly salary paid females, white and colored, in Florida, was greater than the average salary paid in either of the seven states reporting, and was only \$4.46 less than the average salary paid females in the United States. Monthly salary paid males in the seven states, \$31.68, to Florida \$35.50.

6. Amount of school fund raised per taxpayer, \$3.86 to \$5.08.

7. Amount of school fund raised *per capita* of school population, \$2.53 to \$3.76. Lest our own people become too well satisfied with

this exhibit, I give the amount raised *per capita* of school population in three other states—in Massachusetts, \$17.91; Montana, \$21.50; Colorado, \$22.98.

8. Average yearly expenditure for common schools *per capita* of population, 0.836 cents to Florida \$1.25. Average for the United States, \$2.47.

9. Average yearly expenditure per pupil, \$6.40 to \$8.82.

I also read, to prevent too much local pride: The above average for the United States is \$18.45; for Massachusetts, \$33.24; Montana, \$43.44; Colorado, \$41.34. These latter facts so completely overshadow the small satisfaction of leading our immediate sister states that we cease the comparison.

It was not our aim to boast of the little that has been done in our state, but to call attention to the facts, liable to be overlooked, because Florida is not yet one of the populous and wealthy states of the Union.

The public school system in the state was legally twenty-seven years old the thirtieth day of January last; but it gave little evidence of life and did not begin to take root and begin to grow into the affections of the people until ten years later, so it is to-day but in its swaddling clothes.

As late as 1876 it may be said that there was not a school for higher education in the state, though there were two seminaries in name that were practically graded schools. We have no Harvard University, but a State Agricultural and Mechanical College, East and West Florida Seminaries, two State Normal Colleges (one each for white and black), the South Florida Military and Educational Institute, two independent normals, and three denominational colleges,—John B. Stetson University (Baptist), Rollins College (Congregationalist), and the Florida Conference College (Methodist),—all giving higher education and enrolling altogether about 1,200 students.

Our public school system is unique and adapted to the conditions prevailing in our state. I would like to give its main features, but the injunction to be brief continually rings in my ears. Suffice it to say, that ours is the county system, allowing certain district features. Except as to the constitutional one-mill state tax, the county is the financial unit—all citizens bearing equally the burden of taxation, except when a district votes to levy a special tax in supplement of the apportionment received from the county.

The county school levy is fixed by the constitution between a minimum of three and a maximum of five mills. The maximum district levy is three mills. As evidence of the willingness of the peo-

ple to be taxed for schools, a majority of the counties levy the maximum of five mills, only three being satisfied with the minimum.

Many districts levy the special tax, thus paying nine mills tax for educational purposes, including state tax, and apply to the same purpose all poll taxes, the payment of which is made a prerequisite to voting.

Large numbers of the brethren in black deny themselves the right of suffrage by refusing to contribute one dollar toward the education of their children.

The right to fix salaries, assign teachers,—in fact, nearly all power,—is vested in a county board of three members, the executive officer of which is the county superintendent of public instruction.

The state uniform examination of teachers is in successful operation, and is doing much toward raising the standard of teachers. Summer schools under state auspices are held yearly, and monthly county institutes are conducted in most of the counties; both helping to improve our teaching force.

All concede that the negro should be educated, and the people bow gracefully to receive and cheerfully carry the load of taxation for the education of all. It can be truthfully said, that there is not a child in the state, white or black, but that is within reach of a school and can obtain from sixty to 120 months' schooling at public expense if he will only avail himself of the privilege.

The negro is treated more than fairly in the matter of education, as statistics will prove. Some are skeptical as to the value he will derive from it. At any rate, we do not desire the help or intervention in his education of persons knowing nothing practically of the race, and who do not propose to live with the condition of affairs they would create. They must be educated in their own separate schools. Their future in the South is a difficult problem that must be solved by the South; and there is in her enough patriotism, enough humanity, enough Christianity, and sufficient wisdom to solve it on principles of philanthropy to the best interests of the race and to the good of the common country.

We pray that no fanatic be encouraged to intermeddle for our molestation and the injury of that people.

I should like to tell you of some of the difficulties we have to contend with; but as that would be making public family secrets, I desist. Suffice it to say, that, here as elsewhere, like the poor, we have always with us the inefficient officer, the indifferent and unqualified teacher, the meddling politician, and the legislatures "born short" on questions of public school economy.

Again I bid you welcome to our growing state, our beautiful city, our genial climate, and to the warm hearts and outflowing hospitality of a generous and noble people.

PAPERS AND DISCUSSIONS.

WHAT IS THE TRUE FUNCTION OR ESSENCE OF SUPERVISION?

BY C. A. BABCOCK, SUPERINTENDENT OF SCHOOLS, OIL CITY, PA.

The superintendence of all kinds of work seems to divide itself naturally into two parts. First, the general direction of the effort must be determined—the object to be gained must be conceived; and, secondly, there must be guidance along the way—the means necessary to the attainment of the end must be discovered and used. The true function of school supervision consists in the formation of a right ideal of education and in the use of the best means to realize that ideal.

The ideal accepted will determine to a great degree the character of all the means taken to reach the end, just as knowledge of the destination will control even the first steps of a journey. Is it not evident that those who would direct aright even the beginnings of the educational process should have a comprehensive view of the end sought? "Our reach should be wider than our grasp." Many, perhaps the majority, regard education as of value only for its utility, and would limit it to those subjects that are of immediate use in the practice of some craft, or to the knowledge that is essential to the carrying on of business. Arithmetic, reading, writing, and geography are necessary to the world's commerce, for without these it must cease. Astronomy and the mathematics, for their application to navigation and to the measurement of land, and the physical sciences, for their utility in manufacturing, are also recognized as needed branches of knowledge.

Further examination might prove the value for use of many, if not of most, of the subjects of study.

The trouble with the argument for utility is, that it can never conclude. It leaves its advocates at different points of the ascent, each with his theory limited to his own particular range of vision. What he cannot see to be of use he does not think worth acquiring. It thus begets an economical habit of thought concerning knowledge, and tends to a narrow view of life; at the best, a kind of tinker's philosophy, which considers the man of less importance than his job.

But there is another doctrine, and a better one. It regards the man of more significance than any special work he may do, and therefore makes it the province of education to develop him. It seeks by training to give to the mind the full possession of its own powers. It regards the attainment of knowledge as in itself valuable, shows its necessity, and is therefore most vigorous in its pursuit. The utilitarian argument drops out of sight, because it is found that the knowledge which is sought most eagerly—as if its acquirement were the only end in view; its mere possession the sole reward of the effort—is more useful, produces more power, than that which is obtained for some special application.

Confronting every human being is the unknown world. To comprehend this world in terms of its own thought is the task fate sets for every soul.

Only as the child becomes acquainted with the objects around him, and begins to know them, does he begin to live. Only as the man discerns the thought underlying the objects of the material world, and makes it his own, does he acquire any power over that world or does it hold any meaning for him. The world of the present or of history has no existence for him who does not rethink it. There are, it is true, inherited tendencies, but there is no inherited knowledge. Each mind has only what it conquers for itself, and each conquest is a larger realization of itself. This movement of life to still larger life, when once it is fairly begun, is felt to be necessary. Its sway over humanity is as sure and as universal as the uplift of the moon upon the sea. Each mind also feels the necessity of struggling forward; is continually prompted to appropriate greater truth by identifying itself with it. Whatever touches the life of man—his inner spirit—to finer issues, helps forward the incessant effort to reach better, more complete life, is culture. Culture is not a completed product or possession. It is rather a tendency or habitude of the mind. We believe that education to be the true one which aims at culture, or the promotion of the cultural tendency. It will not seek to develop a few special aptitudes, but will consider all the needs of the man from the widest generalizations of experience and of philosophy. It will picture a cultured intelligence, "full summed in all its power," as the crown of all educational effort, and though at times it may give more minute attention to other things, it will still keep this picture in sight.

Secondly, it is the function of supervision to use the means necessary to the realization of the ideal; or to organize courses of study, and to see that they are adapted by instruction to the varying capacities of children. This requires, first of all, a knowledge of children. A good deal has been accomplished in child study recently by the experts.

Supervision needs not only to know the results of this study but to verify them. A knowledge of childhood which is built up simply of general terms, each involving many experiments that are performed by others, will probably be as vague and indistinct as Comenius' picture of the soul in his "*Orbis Pictus*." It may have form, but not much content. The results of child study will be available only to him who studies children. Great caution should be exercised in forming general conceptions about "the child," or any such general concept as "the child." There is no child in general, any more than there is a horse in general. Without attempting to settle the old dispute between the Nominalists and Realists, we will say, that, if there is a general horse, containing within itself the properties of all horses, no one has yet seen or driven it. So, children we may know and teach, but "the child," never. That is a shadowy term; a kind of metaphysical spook, whose claims to consideration must always give way before the children.

Childhood is a distinct period; as different, almost, from that which immediately follows it as the blossom is from the unripe fruit. Children are almost as much a part of Nature as the squirrels or the birds; almost as much at one with her. It is a time "of splendor in the grass; of glory in the flower." Nature makes a delight for the child out of what would be otherwise a hard task—the development of his physical and mental powers by continuous and vigorous exercise. She does this by calling it play. It is doubtful if the common achievements of the first four years of childhood have ever been surpassed by the greatest genius, in the same time, at a later period. In that time most children have learned a language which they will speak well or ill according to the models they have had, and they have learned many of the properties of most of the common things. All things are new to the child, and therefore his interest is intense in them. He sees everything in the halo of the morning light. Every day is indeed an epoch to him. He pursues every investigation which has received the impulse of interest with the industry of a detective. As an illustration of how much children will accomplish when excited by curiosity, permit this description of the experience of a three-year-old boy in learning to read, as told by his mother:

"Upon the wall of the storeroom some one had scratched 'M', and Lucius was very desirous to know what it was; also, what it was for. I evaded telling, not intending that he should know for some time that there were such things as letters. But one day I told him the name, and to his further query told him it was a part of some words,—the first part of 'Mamma,'—and was used in other words. He then wanted M for 'Lucius,' but I told him that would not be right. 'What would be right?' I answered, 'The first letter of "Lucius" is

"L." 'Make it, Mamma.' I did so, hoping his curiosity would be satisfied. A few days later he announces he has found 'M' and 'L' the hearth of the stove, and a whole lot more. 'What are the other letters?' Being some little distance from me his questions contained descriptions. 'What is the round one? Round one with hole in one side? Another round one with a hole in its side and mark on it?' Without much hesitation, I replied: 'O, C, G.' 'Here one round at the bottom and open at the top; another one open at the top but not round at the bottom.' It is not strange that he easily remembered U, and V, since he had noted their peculiarities and compared them with others before asking about them.

"One day he said, 'Why are O and I and L together so many times?' He had seen them in papers and on so many places that he thought there must be a 'why.' I tell him the word, and soon he has the word 'gas' in the same way. These two were the first he knew as words, but they were soon followed by many others, though I think no one encouraged him or gave him any help he did not well earn.

"His attention was soon attracted to the small letters. 'What are these others, and why are they so different?' he asked. He was told that there are two kinds of letters, and he began the same process of hunting down the small letters that he had pursued with capitals. Now, after about three months of quizzing his mother, he can read fairly well, though he makes some queer mistakes in pronunciation. Care was taken never to give him any information that was not first sought by him."

This is not given as an illustration of the most desirable method of teaching reading, but of how great progress a child may make along the line of his interests. Undoubtedly, if learning to read had been forced upon him, it would have proved irksome, and the same result would have been reached after a great deal of worry and with a much greater expenditure of force.

Supervision must so direct the teaching force that it will feel the necessity of knowing children, of learning what they know, how they may be influenced, and what they care for before it attempts to guide them. The interests of children furnish the surest clue for their guidance. If they were set to studying objects for which they care—and to find such is not difficult, for they are intensely interested in all natural things—almost the whole primary course of instruction would grow easily out of this study. They would learn to observe accurately, to verify their observations, and to record them correctly. They would learn to read, impelled by the natural desire of gaining information.

By the side of this work would naturally belong the humanistic studies—the lives of great men, the early history of our own country, and how it came to be what it is; and finally, literature as the art of expression, the voicing of truth and emotion in fitting forms. Besides its own intrinsic value, this course of work also furnishes the most appropriate introduction to the secondary schools.

Courses of study also need revision. The old common school course, consisting mainly of the three R's, has been called a narrow stream, but one which flowed with a strong, deep current. Whether it was strong and deep or not, it was certainly narrow. Compared with it many modern courses may be said to have broadened out or to have flattened out into swamps. There must be condensation; some branches must be dropped, and only those retained which naturally assist each other and which are necessary to the cultural needs of the learner. The course may also be shortened as a whole by substitution. Much of the work in arithmetic is more difficult and abstract than some of the work in algebra, and these may properly change places. Considerable of the time spent upon technical grammar might be much more profitably spent upon French and Latin, as recommended by the committee of fifteen. We have great hope of help in this direction from the attention which is now being given to the composition of courses as determined by the relations of the separate studies.

It is also the function of supervision to look after the interests of the individual while dealing with masses. Companies of learners cannot march through a curriculum and all arrive at the same time. The course of studies may be "nailed to the calendar," but the children should not be. A certain amount of work may be assigned to each grade or year's work, but the pupils in each grade may be divided into groups, the greater number of groups being formed in the lowest grades and diminishing to two in the upper grades. The individuals of each group may be changed as often as may be necessary. Each group progresses as rapidly as it is able, passing the yearly limits when the work is done, and not necessarily at the end of June. If it be objected, that this plan of grouping means short recitations, the reply is, that a child of six years of age or less will learn as much of one subject in a short time as he would were he to devote all day to that subject. His mind refuses to act very long in any one direction; for him "change is rest." As the child advances in years or progresses in the course the time of the recitation will be lengthened.

The plan proposed arranges for five classes or groups in the first year, four in the second and third, three in the fourth, and two in each of the succeeding. This would in a large measure do away with

the discouragement which often results from sending a pupil back to do over again a half or a whole year's work because he has failed at the end.

Finally, it is the essence of supervision to so organize instruction that the efforts of both teachers and pupils may harmonize and secure the highest results in culture to the learner.

The course which makes culture its aim is the best preparation for life which those students can get who do not complete it but who are compelled to drop out at different stages of advancement. Their faces are set in the right direction, and they have been guided awhile along the true path.

DISCUSSION.

SUPT. F. TREUDLEY, Youngstown, Ohio.—It may be a commonplace statement, and yet I do not know how better to express my thought than by saying, that the function of supervision is to realize in practice the ideals of the supervisor. In this respect it is like all work to which the race puts its hands. The business man sees in his growing business the realization of long-cherished ideas. The scientist works out the dim visions that come to him and at last gives to them tangible form.

The artist, whether he be a poet, giving to his dreams "a local habitation and a name;" a sculptor, impressing upon marble the forms embodied by his imagination; an architect, rearing to heaven his splendid conception of what is fitting in God's worship; a painter, setting forth his thoughts of life and death; a musician, delighting the ear with matchless harmonies—all these, alike, are engrossed in the one sole aim of realizing, in tangible forms, what they deem of most worth.

In this respect, the work of supervision is in common with all other occupations. From many, however, it differs widely, both in the agencies with which it works and in the material upon which it works.

It differs in the agencies, for those of the supervisor are men and women, varying in aptitude and capacity for their work. And hence, as a pursuit, the work of supervision is difficult, baffling, uncertain; peculiarly prone to yielding ground for discouragement, because one cannot always clearly determine what he has accomplished or the degree to which the products of manhood or womanhood belong to him, or to the teacher, or to the many agencies engaged, by divine appointment, in the education of youth.

The supervisor's work belongs to a realm less visible to the eye than that of occupations engaged upon a different material. He deals with that which is more delicate and refined. But herein is lent a worth of peculiar quality, imparting an almost divine aspect. Because whereas in other pursuits the work once done is done forever (an immortal work of art may be a discovery, an invention), the work of the teacher, the supervisor, grows, changes into more beautiful forms as the soul co-operates all through life,—and may be, through eternity,—with that influence which, at an early stage, sought to mold it. For life can pass into life to quicken it, invigorate it, enlarge it, uplift it, speed it on in its work of self-ful-

fillment. A teacher may impress upon his pupil a form of life into which he will grow, not as a statue out of marble, but rather as an oak tree out of an acorn—a work of Deity. And herein, life seems to share in the possession of creative power.

I have answered thus imperfectly the question in part, from the standpoint of my view; for the function of a faculty or power is defined as its natural or assigned action. It is the function of the eye to see. It is the function of supervision to realize in human life its ideals.

What more is vital to this question? Two elements are of infinite importance.

1. The quality and worth of the supervisor's ideals.
2. Whether, these being worthy, he can incorporate in practice the thought embodied in these words of Lowell, "Endurance is the crowning quality and patience all the passion of great hearts." And first, let me remark upon the ideals of the supervisor.

Does one ask what is the crowning evil or weakness of supervision? I will answer in a word. It is the combination of power with low ideals as to the purpose of education. I have heard many times the tribute—and a just one, too—paid in this department to the influence of the superintendents of this country upon the future of public school education. But often it may be said of teachers, when one thinks of what stands for supervision over them, "Thou art mated to a clown, and the grossness of his nature will have weight to drag thee down." I recall Arnold's statement to the effect, that he knew no, sight more pitiable than the yoking of a bright, gifted boy to the neck of an incompetent teacher. I recall the words attributed to Napoleon, "Better an army of deer led by a lion, than an army of lions led by a deer."

Now, briefly, what are some worthy thoughts of the supervisor's work? That power is more than knowledge? Agreed. That character is the end of life? Agreed, if it be modified to meet the saying of Richter, "I have made out of my life all that the stuff would admit of." But what is character? Who are educated? One has said, "We are the residuum of all that we have done, or felt, or thought," implying that the end of education is the securing of a noble residuum. To come down to more concrete and minute examples. Our pupils are said to be able to read perhaps fluently, but not tenderly, thoughtfully, appreciatively. They are said to know the forms of things; not to realize their contents. They are said to have "eyes which see not; ears which hear not;" it having been forgotten that eye and ear must be attached to the soul if they would perform the work for which they were created. Are these commonplaces? Granted. It is the business of life to invest the commonplace with significance.

Education means the conversion of one's seeing "in a glass darkly" into the "seeing as face to face." Education means the realization, as by Peter of old, that "What God hath cleansed" we are not to call "common or unclean." And what is common or unclean upon which his hand has rested? Nay; true education is identical with religion as defined by Jonathan Edwards, consisting of "Ability to know what things are really great; what things are really small."

True education is the cleansing of the world for man. It is the taking of nature out of the commonplace and making it glad with intelligence, with thought, with love. It is the peopling of streams, of fountains, of woods, of meadows with greater than the divinities of Grecian mythology; with God himself. It is the investiture of man with the glory of his birthright; for if one turns to human relations and human endowments, education is again the ideas of Herbart, those ideas of freedom, of efficiency of the will, of good will, of equity, of justice, which, once gained, make their possessor immortal and earth a vestibule of heaven.

The fact is our best teachers stand round about us on every side. It is but the simple truth that principalities and powers stretch out toward heaven from every individual.

Archimedes once said, "Give me where to stand and I will move the world." Is there such a place? Verily. Where a man stands is the place of power or weakness. And Emerson expressed it when he said, that, if we would make ourselves sound and self-sufficient, we would be felt to the uttermost parts of the universe.

Suppose now, that, by thought, meditation, the reading of great books, communion with noble souls, praying to a great Father,—not a being dragged to the human level but the Maker of heaven and earth, and one who has said, "If a man lack wisdom, let him ask of God who giveth liberally to all men and upbraideth not, and it shall be given,"—the supervisor comes to his kingdom, what then? What then? The world becomes invested with significance and life filled with a perennial interest and charm.

Then childhood begins to receive its proper investiture. Possibilities expand. Self-complacency, conceit, narrowness, pride,—the pride which Emerson called the soul's curse,—fly out of the soul as bats out of lightened chambers.

Then what does the supervisor become? He becomes a healer of souls; a bringer of sunshine; one whose feet are as the feet of messengers of peace upon the mountains; a presence with anointing oil summoning some ruddy shepherd boy from the flock, and sending him along a career, shining more and more unto the perfect day. This is the very essence of supervision, for here is power. It is the power which transforms the world; better yet, transfigures it. It is the power that Dante felt when threading with Virgil the Inferno; that power manifested when thought and will are one.

What more can be said? Many things. But these two must be said, viz.: First, that the great objective point of the supervisor's art and power must be the teacher, for whom he must have sympathy, and to whom and whose work he must apply the law of compensation, remembering, that, while to some are given gifts of intellect, so that they can "rightly divide the word," to others are given the power to apply truth, and possessed of a grace of manner and a charm of disposition, are able to realize the notable utterance, "Out of the heart are the issues of life." All this, for "as the teacher so the school." And second, and lastly, it must be said that the supervisor, in common with the teacher, must dwell with children if he would receive perennial strength.

There is a deep and abiding truth in Dr. Parkhurst's description of teaching as being an incarnation, a descent to narrow limits in order to lift life up, in illustration of which he cited the Oxford professor who so loved his little child of feeble mind that, daily, he descended to his narrow limits until he lifted him up to bear off a prize at Oxford. We speak reverently here, but we speak truthfully. The power of the Great Teacher was anticipated in Socrates surrounded by Athenian youth. It was illustrated in Pestalozzi kneeling beside the beds of his orphan children at Stanz and teaching them until they fell asleep. It was illustrated in the person of Dr. Howe, when he descended through a single sense into the narrow life of Laura Bridgman, and led it out into a marvelous light. But, ah! the reward of it; the glory of it. Life here and life forever with him who set the great example, and who gave to us this saying, "Unless ye become as little children, ye cannot enter the Kingdom of Heaven."

SUPT. J. H. PHILLIPS, Birmingham, Ala.—The spiritual element as an essential characteristic in efficient supervision has been eloquently presented and forcibly emphasized in the discussion of this topic. To all this we most cordially assent,

but we should not overlook the fact that the essence of school supervision implies other and more practical phases. I wish therefore to call attention briefly to the practical element in supervision. Contact with actual conditions as found in the average school system, managed by an average board of education, is not calculated. I fear, to develop the spiritual nature of the average superintendent.

The topic as given in the program would suggest that there is some one essential function or essence that must characterize all school supervision, including that of several provinces widely differing in their requirements, such as state supervision, county supervision, city supervision, and the supervision of a single school. If we eliminate all elements of difference in these several spheres of supervision, and reduce those requirements common to all into a single essence or function, what shall that function be denominated? It would seem to me that the essential essence of all school supervision is intelligent, sympathetic, and conservative leadership. This characteristic must be a primary qualification in every sphere of school supervision.

If we undertake to describe more in detail the practical phases of this essential element, I would point out, first of all, what I may call the pedagogical function. The superintendent must be able to lead his teachers in the actual work of the schoolroom. Professional skill and practical common sense are here indispensable. In the next place may be mentioned the executive function. The superintendent must commend himself to the school authorities as well as to the public by his business qualifications. He must have the ability to manage, if necessary, the business affairs of the schools in a thorough, efficient, and also in an economical manner. He must be a good business man. Again, I would mention, with some degree of diffidence, a phase that most superintendents are compelled to recognize—the political function. The superintendent of a city school system, or of a state school system, if he be successful in accomplishing anything, is forced to be, within his particular sphere, a tactful politician. He must come in contact with politics in its various forms, and must have force of character, tact, and energy, in order to protect and advance the interests of the schools. He must, from his position, advise and direct his board of education, and in order to gain and retain their confidence, he must not be afraid to assume responsibility. Boards of education, as a rule, are precisely what superintendents make them. When a board of education assumes the entire control of the schools without consulting the superintendent; when it examines and appoints teachers, examines and promotes pupils, constructs courses of study, selects text-books and dictates methods, it is because some feeble superintendent, too weak or timid to assume responsibility, has shirked his duties and placed them in the hands of the board. History shows, that, when power is once acquired by any body of men, that power is yielded with great reluctance. Boards of education must, as a rule, get their conceptions of school management through the superintendent, and superintendents are responsible largely for the deplorable conditions found in many school systems. The school superintendent, if he is fitted by nature and education for his position, must meet the conditions and requirements of educational leadership, and he must be courageous enough to assume the responsibility such leadership entails.

*WHAT IS THE BEST USE THAT CAN BE MADE OF THE
GRADE MEETING?*

BY EDWARD C. DELANO, ASSISTANT SUPERINTENDENT OF SCHOOLS,
CHICAGO, ILL.

It may seem unnecessary to state that the purpose of education is physical and spiritual growth. On this point there is practically perfect concentration of opinion. While general unanimity as to purpose exists, unanimity as to the processes and methods of education is far from being a universal fact. While all desire and seek the same end, there are disagreeing, if not conflicting, theories concerning the means by which the end sought may be most successfully and expeditiously attained.

During the present decade educational minds have been exceedingly active in the attempt to raise all forms of educative work to a higher plane, more completely in accord with the accurately determined and clearly expressed psychological ideas of the day. It is one of the most hopeful signs of the times to the leaders of thought in the educational world that the study of mind, in all its varied forms of activity, is so earnestly and generally pursued on account of its practical bearing on the work of the schoolroom. The natural order of mental development, the action of the mind under the influences of its more or less fixed or ever-changing environment, its tendencies in different stages of development, the regulation and proper direction of its ceaseless activity, especially during school life, have become subjects of absorbing interest and of paramount importance to a constantly increasing number of teachers in the elementary schools of our country. It may still, however, be safely assumed to be true, that a large proportion of elementary teachers, even in cities, has received but little instruction of a strictly professional character as a preparation for rational and efficient service. Normal schools and schools of pedagogy are becoming more numerous, but their graduates, though annually increasing in number, constitute at present but a small fraction of the great army of teachers employed in our public schools. The deficiency in normal or pedagogical training must be supplied, if supplied at all, by the supplementary work of other agencies having in view a similar purpose. Among the notable instrumentalities for the improvement of teachers and increasing the value of the work done in elementary schools may be mentioned university extension, the summer school, the state association, the county institute, and the teachers' reading circle. These agencies, working in different ways for accomplishing the same end, have inspired many teachers with a desire for progress

and self-improvement, which have acted very beneficially on the schools with which they are connected.

At this hour I have been requested to consider the teachers' grade meeting as a means of modifying and improving educational work. Education, it is true, is a continuous process from the beginning to the end of life, and the multifarious influences, direct and indirect, which make for education in one form or another are continuously active, more especially during the period of childhood and youth. There is a natural sequence in the development of mental power to which all educational methods and processes must conform if the great purpose of education is to be accomplished even to a moderate extent, and the division of this most important period of intellectual growth into subperiods, each requiring mental action in kind and degree appropriate to the developing soul of the pupil as suggested by a close and accurate observation of nature, is based upon a world-wide experience.

The arrangement of pupils in grades is followed by a corresponding classification of teachers when practicable. As in the industrial world, so in the sphere of educational activity, the division of labor has come to be recognized as of paramount importance. Whether the application of this principle, so efficient in the production of material things, to educational work is wise or unwise is still, in the minds of many competent judges, a question not yet satisfactorily answered. But the grades we have; grades of pupils, grades of teachers. Has the graded school attained the highest degree of efficiency, or is there a plane of nobler achievement than that on which the best of such schools now stand?

If our graded schools are to become more efficient in the production of results most to be desired, the grade teachers upon whom the work of instruction chiefly devolves must become more thoroughly acquainted with the true principles and the natural methods of teaching. Not only must knowledge of educational principles be more widely diffused, but skill in their successful application much less rare than it is now. The great and rapidly increasing body of elementary teachers must also be inspired with a desire to perform their work more efficiently and to utilize to the utmost every available means, every accessible source of power, for the realization of that desire.

Before considering the utilities of the grade meeting as a means of rationalizing—perhaps, revolutionizing—the processes of teaching prevalent in many graded schools, it may be well to survey hastily some of the marked defects observable in such schools.

With all the obvious and manifold advantages of the graded system, defects exist which must be corrected or eliminated before the

system can produce satisfactory educational results. One of the prominent defects which the intelligent observer perceives in the graded school is the want of unity of purpose, the lack of continuity of effort, of many teachers through whose hands pupils pass in their progress from grade to grade. This defect is one of serious import. It happens too frequently that the results of the excellent work of one teacher (excellent because based on well established psychological principles) are largely neutralized by the unscientific methods of her successor in the grade above to whom her pupils pass by promotion.

A second defect in graded work arises from the observed tendency of teachers to become isolated, independent factors in the system of which they form a part. They survey, not the whole field of instruction as defined by the course of study, but only a limited part of it. They perceive no sequence of steps determined by the laws of mind. They perceive no connection between the work of their grade and that of preceding and succeeding ones. They fail to recognize the educational relation which one period of school life bears to another. The combined work of such teachers is fragmentary, and its results in every way unsatisfactory.

Much of the inefficient work existing in graded schools must be attributed to the inefficient preparation of grade teachers in scholarship and professional training. Skill in teaching requires not only a knowledge of educational means which may be supplied by a broad and deep scholarship, but an eminent ability to use such means wisely and efficiently, which may be secured in a large measure by proper professional training.

Without further digression, let us seek to ascertain in what way these and other defects of our elementary schools may be corrected and their work be made continuously good from its inception to its close. As is the teacher, so is the school. If the schools are to be improved, such improvement must come through improved teachers. Prominent among the agencies for the improvement of teachers, more extensively employed than any other, is the grade meeting. Its elements are homogeneous. The work to be performed by its members is practically the same in scope and detail. All deal with minds in about the same stage of development, and may pursue virtually the same educative course, unless individual peculiarities make deviation desirable or necessary. No situation could be more favorable for developing and communicating educational ideas and methods. The grade meetings of any system of schools are under the immediate supervision of the superintendent. In them he finds the most favorable medium through which to infuse his own spirit into and impress his educational views upon his teachers. The best

results of his study, observation, and experience may be set forth here in the most effectual way, with a reasonable assurance that they will be cordially received by those whom he seeks to benefit, and materially improve the schools under his direction. He may call into the service of the meeting the brightest and best of his own corps of instructors. He may summon to his aid colaborers from other educational fields whose enthusiasm and ability fit them to inspire with energy and love of progress all with whom they may come in professional contact.

The richest fruits which the grade meeting is capable of yielding cannot be secured in the absence of sympathy between the superintendent and his teachers. There is no place in the field of educational work in which concord of sentiment and purpose is more essential to success. Sympathy here is as necessary as in the school-room between teacher and pupil. The want of it begets lack of interest and failure more or less complete. Hence the leader of the grade meeting should seek to bring into unison with his own mind the minds of those through whom he would raise his schools to a higher level of educational efficiency. Many a grade meeting has closed without inspiring those in attendance with a nobler purpose or empowering them to do a broader and more effectual work. Through want of sympathy the benefit that might accrue from the varied experience, the extended observation, the profound study of the leader cannot be realized.

The purpose of the grade meeting should be clearly defined, and its plans systematically formed. The leader's knowledge of principles, methods, and management should be such as to command the respect and approval of those whose efficiency he aims to increase, whose service as educators he purposes to render more valuable through the application of more rational principles and the adoption of more scientific methods. He should secure and retain the earnest coöperation of those with whom he works. His instruction should be clear and intelligible. He should neither soar to heights unattainable nor journey to regions inaccessible to many of his audience. The rich fruitage he would have them gather must not hang too high. Grapes, however luscious, beyond the reach of those who would pluck them are always worthless. The leader's manner should be persuasive, conciliatory, winning. His criticisms of defective skill, the use of wrong methods, the misapplication of right ones, which may have come under his observation, should be earnest and frank, but so sympathetic as to excite rather than extinguish hope. It should be assumed that all present have learned valuable lessons from experience, furnishing an excellent basis for better work in future. The grade meeting should not be an occasion for a display

of the wit and humor of him who conducts it. Valuable time may be wasted, thought dissipated, attention diverted from essential matter by indulgence in mere pleasantries—entertaining, perhaps, but valueless. An earnest spirit of inquiry, a sincere desire for progress, a determination to engage heartily in such intellectual work as may be necessary to accomplish the objects proposed, should characterize all present. To this end the energies of the leader, in fullest and freest play, should be directed.

All varieties of school work form appropriate subjects for discussion at the meeting under consideration. The kind and quantity of work for each grade having been determined by the course of study, the grade meeting becomes an important, perhaps necessary, means of so directing the efforts of teachers that the best results attainable may be secured. To one conductor of grade meetings it may appear most desirable that all instruction should have an immediate and so-called practical bearing on the exercises of the schoolroom prescribed by the program. To him methods of instruction would seem to be the most appropriate subjects for consideration. To another, the psychological principles on which all effectual teaching is based seem of first importance. Perhaps the path of greatest usefulness would be a resultant arising from due consideration of both of these conceptions. There can be no doubt that psychological study should form a prominent feature of the work in contemplation. Happily methods devised by others are less frequently than formerly presented for unquestioned adoption. The more generally approved way is to acquaint teachers so thoroughly with the laws of mental action and growth that they will be able to devise such methods of instruction as will enable them to accomplish the best results, working in accordance with individualities and with instrumentalities largely created by themselves. Another hopeful and healthful sign of the times is the general trend of thought in the direction of basing all educative processes on the deductions of psychological study.

The usefulness of the grade meeting may be promoted by the presentation of class exercises by teachers who, through the possession of clear and practical psychological knowledge and special skill, have acquired marked success. To some teachers the observation of a little excellent practical work is more valuable than much of the most elaborate theoretical instruction. They cannot from the clearest oral presentation of pedagogical principles construct a satisfactory ideal of class work. Without becoming mere imitators, they may be greatly aided by such practical exhibitions of skill. With due allowance for the admitted evils of so-called show work, one may easily believe that valuable suggestions may be derived from such exercises.

While it may be generally admitted that methods and principles of teaching should form the distinctive and dominant feature of the grade meeting, it is not difficult to conceive that one of its best uses is the enlargement of the general or special scholarship of its members. Any form of class or recitative exercise that would accomplish this result might give an impetus to study and investigation in the line of pedagogical work that would be productive of notably beneficial effects on the usual exercises of the schoolroom. The services of a well balanced specialist might occasionally be secured to supplement the superintendent's work in this direction and give greater utility to the meeting.

A line of theoretical or practical thought may be suggested at one meeting for general consideration at the next. Pedagogic and other forms of educational literature are so numerous, excellent, and available, that few, if any, imbued with a progressive spirit, will encounter much difficulty in making the needed preparation for such an exercise. The educational journals of the country teem with valuable information concerning every phase and feature of school work, and their cheapness puts them within reach of the teacher of the remotest district, of the recipient of the smallest salary.

Short talks by previously appointed members, on topics of their own selection and within the limits of their respective grades, often add interest to and increase the usefulness of the grade meeting, by bringing forth numerous suggestions of much practical value, based, as they are, on the most successful experience. Nothing so develops, concentrates, rectifies thought as the necessity for the accurate and effectual expression of it. Every teacher needs this power. This feature of the grade meeting affords an excellent opportunity to acquire a useful measure of it.

The query method occasionally introduced into the grade meeting may conduce to happy results. Pertinent questions may awaken in the minds of earnest teachers trains of thought often leading to a satisfactory solution of difficult and vexatious problems. Obstacles considered insurmountable, difficulties believed to be insuperable, through a deeper penetration or more comprehensive vision produced by some happy response to a fortunate query, have been readily overcome.

As in the religious, so in the grade meeting, the experience of each may be profitable to all. This direction may sometimes be given to the meeting we are considering with singularly beneficial results. Teachers disposed to be despondent through want of success in any department of their work may not infrequently be roused to greater and more rational exertion on learning that their collaborators have encountered similar, perhaps greater, difficulties, achieving

abundant success in the end. The great variety of circumstances and methods which a meeting of this character may place before its members cannot fail to furnish some suggestions that may be usefully applied in every school represented.

A practical paper by an efficient principal may now and then be interesting and profitable to grade meetings. Such papers, free from the studied formalities and profound speculations of the association or convention address, often exert a beneficial influence, because replete with educational views and suggestions originating in the field of work in which the members themselves are engaged. The efficiency of the grade meeting would doubtless be considerably increased if principals more frequently participated in its exercises. What better way of expressing the sympathy so constantly needed by teachers in the difficulties and perplexities of their work?

One of the most important and necessary uses of the grade meeting is to enable every teacher to perform the scholastic work of her grade as efficiently as possible. To this end every subject in the prescribed course should be carefully and exhaustively studied, and the most effectual method of presentation be determined. The educative value of every subject should receive due attention, and methods of study and recitation deducible from the laws of mental action should occupy no small portion of the time of the grade meeting. The natural relation and sequence of subjects, their natural dependence, their relations as auxiliaries, cannot be neglected here without detriment to the efficiency of school work. There are multifarious questions concerning school management which cannot be more fruitfully discussed or more definitely settled on what may be called a practical basis than in the grade meeting. The most elaborately woven educational theories, gathered by careful and extensive reading, having been subjected to the test of the schoolroom, may be presented, discussed, approved, or rejected, as they have stood or failed to stand the strain imposed upon them. The newest assumed educational facts may be brought into the grade meeting, and there exposed to the scrutiny of those eager for such information as can be of practical use in everyday work.

In all exercises of the grade meeting the centrifugal tendency of thought must be carefully and constantly guarded against by the leader. When all minds are vigorously held to the central idea; when every statement made tends to the elucidation or development of that idea, the value of the grade meeting is greatly increased.

The concentrated attention of every member is necessary, that the content of the leader's directions and instructions may be fully and correctly grasped; that ignorance, partial understanding, or entire misconception of what is said may be avoided, and a fruitful source of subsequent evil be prevented.

Educational appliances may be conspicuously absent from the grade meeting, but the presence of a body of earnest teachers, conscious of their needs and defects, taught by experience the necessity of a better equipment for a better performance of their work, eager to improve every facility to enlarge their theoretical and practical knowledge, anxious to utilize every means by which their views of education and educational agencies may be extended, affords an opportunity for useful work in the grade meeting rarely possessed by the professional school.

DISCUSSION.

SUPT. H. E. KRATZ, Sioux City, Iowa.—It is evident to even a casual observer, that, at present, the trend of educational thought is from the extreme of dead uniformity, on the one hand, to the other extreme of impractical individualism.

Only a few years ago the autocrat of uniformity ruled us as with a rigid rod of iron, and we bowed in meek subjection to his tyrannous decrees. System was the touchstone by which schoolroom work was tested. If it failed in this essential, it was like salt that had lost its savor, good for nothing but to be cast out and to be trodden under foot of—superintendents.

We rigidly classified the pupils according to some exact but superficial memory test. We conjured up a fictitious average pupil, through whom, we fondly believed, the exact amount that a class should do could be accurately measured. We laid out an inflexible course of study, measured by the supposed capacity of that fictitious average pupil, and religiously tried to cram that course of study down the mental æsophagus of each child, *volens volens*, without any special regard to his individual powers of assimilation.

Woe unto the teacher who dared change or adapt in the slightest degree the course of study, or modify the prescribed methods of presenting each subject! We are led to exclaim, Oh, Uniformity, what crimes have been committed against the children in thy name!

We are in danger now of rushing into the other extreme of impractical individualism. Uniformity is apparently regarded by some as an evil *per se*, to be rooted out wherever found. This will certainly lead to disorganization and demoralization. A certain amount of system and order must characterize the work of our schools.

I am, however, heartily in accord with the efforts recently put forth to gain an insight into the chief characteristics of each individual pupil, so that instruction may be adapted, not to a fictitious average pupil, but as far as possible to the peculiar mental attitude and needs of each pupil.

I also believe heartily in the view, that we need more than ever before to conserve the individuality of our pupils. The time has come in our complex and highly differentiated civilization when we must more carefully study individual traits; more carefully seek out and nurture special ability and adjust students to their life work—their special niche.

In order to secure these results, a course of study must be regarded as a mere outline, which the teacher is to adapt, as far as possible, to the individual requirements of each child. To give the teacher this freedom is the logical deduction of

our plea for the conservation of the individuality of the pupil; and for the same reason, she must be given much latitude as to the methods she employs.

In the evolution of the efficient teacher, three stages can usually be traced, viz.: First, the imitative stage, which is chiefly characterized by the careful imitation of the manners, methods, and devices of some former favorite teacher. But little thought characterizes this stage. Attractive methods are industriously sought out, and eagerly swallowed without any thought of analysis or assimilation. Some teachers never evolve out of this tyro stage, and may be termed cases of arrested development.

Second, what may be termed the irrational stage, in which there is much said about pedagogical principles and doctrines and very little done along the line of their wise application. We hear about "from the concrete to the abstract," but see that order frequently reversed in the schoolroom. We hear glib talk about apperception, interest, concentration, etc., but look in vain for their intelligent application in schoolroom work. This may be characterized as a hopeful, perhaps necessary, stage in their further evolution.

Last comes the thoughtful stage, in which everything that enters into school work, whether it be principle, or material, or method, or device, is subjected first to most thoughtful scrutiny, to see whether it commends itself to the judgment, and then subjected to the still more critical test of results in the schoolroom. This is the stage that is characterized by enthusiasm, growth, progress, ever-increasing efficiency and power.

As far as teachers' meetings are concerned, the superintendent generally tries to increase the efficiency of his teachers through three kinds of meetings, viz.: First, the general teachers' meeting, held either in sections or in one body, in which his chief purpose is to stimulate his teachers to a more energetic, thoughtful, and intelligent work through a better understanding of the child and of the general principles which underlie successful teaching, to inspire them with greater enthusiasm and love for the work, and to foster a stronger *esprit de corps*; second, the principals' meeting, in which he is in consultation with his principals, as his cabinet or advisers in shaping his plans of work; and last, the grade meeting.

If the work of the general and principals' meetings has been carried on as indicated, then the work of the grade meeting chiefly resolves itself into the consideration of how the subjects of that grade in whose interests the meeting has been called shall be presented.

We take it for granted that there is no need to present subject-matter in the grade meeting, except when a new subject is being introduced into the course of study. Hence the grade meeting chiefly considers the best methods of presenting to a class the subjects taught in that grade.

Shall the superintendent, having confidence in his own judgment, present what he thinks to be the best method of teaching a certain subject and insist that his teachers strictly follow his method? A great many objections can be justly urged against such a course. Suppose the subject be primary reading. Dare he, on his own judgment, and without the searching test of schoolroom experience, insist that all his primary teachers must sink their individuality and rigidly follow his method? Such a course as that would almost certainly invite failure, and would indicate on the part of the superintendent a sublime confidence in his own infallibility.

Better will it be for him and his teachers if he present a method as skillfully as he may be able, commend its merits and criticise its defects; or better still, he can give a general outline as to what he wishes presented and how it should be presented, and then wisely leave the exact details to be worked out by his teachers. He should invite the freest and fullest discussion of the plan of work, and be ready to adopt any good suggestions or modifications which may come from his teachers.

The superintendent needs to exercise much good sense here, so as to discriminate between criticisms aimed at his plan and those aimed at himself. The personal element must not enter here.

Best of all, remembering that he has those three classes of teachers to deal with, the imitative, the irrational, and the thoughtful, he should invite one of his most successful teachers to present her plan of teaching a certain subject, or request her to instruct a class before the grade meeting. Wise choice is necessary here, so as to secure a teacher of judicial temper, who will not be easily disturbed by the sharp cross-fire to which she will likely be exposed when her work is thrown open to discussion. The superintendent must wisely direct and shape the course of the discussion, and from his knowledge gained through schoolroom visitation, thoroughly vitalize it. This I regard one of the most helpful modes of conducting a grade meeting.

In the study of the best plan of teaching a subject, there are so many complex elements that enter into it, so many important results in the child's development that should come out of it, that I dare not as superintendent trust myself to simple theory. I dare not dogmatize where so much is at stake. When there comes a conflict between what judgment seems to indicate and the results attained in the schoolroom, I bow to the dictum of intelligent experience rather than to that of cold logical theory. I am, therefore, fully convinced, that the kind of teaching which has been thoroughly tested in the schoolroom, and has produced the best results there, is the teaching which should be presented as an object lesson in the grade meeting.

SOME SOCIOLOGICAL FACTORS IN RURAL EDUCATION IN THE UNITED STATES.

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Education is one of the most important social functions. It is society that, employing its various agents, uses the accumulated knowledge and thought in its possession to form the character and direct the lives of the new members that are constantly being admitted to its ranks. In this way, education acts strongly upon the social functions; so strongly, indeed, upon some of them that it may be said to determine their character. This is not all. It is equally true that the other social functions act strongly upon this one, serving to determine both the quantity and the quality of the education that society furnishes its members. It is to the discussion of this second proposition, limited, as it is, in the program, that this paper will be devoted. First, however, we may take a broader view of the subject, with a view of seeing more definitely what it embraces.

In the month of August, 1891, the Swiss celebrated two notable anniversaries. On the first day of the month the confederacy celebrated the sixth centennial, and on the fifteenth the city of Bern the seventh centennial, of their respective foundations. Every man

who gave any real thought to these two anniversaries must have remarked that the place of Switzerland in the history of the world, and in the present life of the world, is quite incommensurate with her territory, population, and natural resources, and must have reflected upon the causes that have made it so. The Swiss area falls a little below 16,000 square miles, and the Swiss population a little below 3,000,000 souls. Together, Massachusetts, Connecticut, and Rhode Island are somewhat less in size and somewhat more in population. Among the causes of the disparity to which attention has been directed, high place must be accorded to education. The federal constitution of Switzerland contains these provisions: "The cantons provide for primary instruction, which shall be sufficient, and thus be placed exclusively under the direction of the secular authorities. It is compulsory, and in the public schools, free. The public schools shall be such that they may be frequented by the adherents of all religious sects without any offense to their freedom of conscience or belief." The country ranks among the foremost of the world in respect to public education. The amount of money expended on schools of various kinds is proportionately high, while illiteracy in large parts of the country has been practically annihilated. In the year of the two centennials referred to, primary education cost on an average forty francs, and secondary education 151 francs, to the scholar. The average expenditure for primary schools was ten francs for each inhabitant. There were, however, marked differences in different parts of the republic. The best cantons compare favorably with the best states of North Germany. While the German and the French cantons, other things being equal, are on the same footing, the Italian cantons fall far into the rear. The contrast between the Protestant and Catholic cantons is marked. Not only do the Protestant cantons surpass the others as a rule, but the Catholic cantons rise higher in the scale the more they have been touched by modern progressive influences. In the full Protestant cantons the school attendance is one to five of the whole population, in the half and half cantons one to seven, while in the Catholic cantons it is one to nine. Zürich makes an excellent showing; but Zürich has an educational history running back for centuries. It contains the largest of the Swiss cities; next to Geneva, it has the densest population, and is also very wealthy. Protestant controversialists have been prompt to ascribe the superiority of the Protestant cantons in general solely to religion, but it is only fair to observe that, as a class, the Catholic cantons are the more mountainous, the more thinly populated, the poorer, and the more backward. Such cantons as Uri, Schwyz, and Unter-Walden-Nied expended but three francs for each inhabitant on education, while Zürich, Schaffhausen,

and Basle expended fifteen, sixteen, and twenty-four francs respectively. Uri, Schwyz, and Unter-Walden-Nied, which formed the original confederacy in 1291, all abut upon the great central lake; they are all small; they are infertile, thinly populated, containing no considerable towns, and are largely devoted to grazing and pasturage. Uri has the sparsest population of all the cantons, save alone the Grisons, which lies on the Italian side of the Alps. Now, in studying Swiss civilization, these facts cannot be separated. They hold together. They give an excellent example of the interaction of social forces, or of the mutuality of cause and effect. Change any one of the factors, and you change more or less the whole circle to which it belongs. So much will suffice to illustrate what is meant by sociological factors in popular education.

The subject as defined on the program offers to our minds many extremely interesting facts. It will be best, however, to confine our attention to such phases as have also practical importance, holding out some promise of reform or progress.

First, we will give our attention to density of population. The importance of this element in the rural school problem becomes obvious at a glance. In populous localities fewer schools and districts, relatively, are called for, while at the same time, owing to the larger numbers and the more varied attainments of the pupils, the system can be more fully developed. The school and the home under the present system cannot be far apart; otherwise children will attend the school with difficulty or not at all.

Once more, the interest and enthusiasm of pupils and teachers depend directly upon the number and the ability of the pupils present. For the majority of children, individual instruction, or anything closely approaching it, is not to be commended. Aristotle condemned such instruction on political grounds. It is also to be condemned on pedagogical grounds. Children need the inspiration of numbers. Besides, there is a larger ethical element in numbers. As a rule, you can no more make a good school out of a half-dozen pupils than you can make a powerful galvanic battery with one or two pairs of plates. Then, again, the question of cost is directly involved. Where pupils are scattered and the schools are small, education is necessarily very expensive, provided it is at the same time good. Generally, however, it is bad.

To illustrate. Some twenty years ago I investigated one of the oldest townships in Northern Ohio with respect to its school condition, and with these results: Number of schools, 7; youth of school age enumerated, 191; pupils enrolled in schools, 103; average daily attendance of pupils, 71; average size of schools (number of pupils), 10; largest enumeration in any district, 85, smallest, 12; largest en-

rollment, 37, smallest, 3; largest daily attendance, 25, smallest, 3; largest cost per pupil in any district, \$42.66, smallest, \$18.56. Argument is not needed to show that this was an inefficient and wasteful system of education. How much better it would have been if the seven schools could have consolidated, thus putting all the pupils under two or three teachers! I remember a school in Ohio within sight of my own home that was kept in session a whole summer with but two pupils in attendance, and these two were all there were in the district. My father, who was a man of close observation, was in the habit of remarking, in my boyhood, that a farm of 1,000 acres, situated all in one school district, would, as a rule, spoil the school by reducing the number of children, and I have often seen confirmation of his statement.

The census office at Washington considers those parts of the country that have a population of less than two to the square mile unsettled. These parts amount to a little more than one-third of the whole, not including Alaska. Once more. In constructing its tables and maps to show density of population, the census office excludes the cities, or those centers of population containing 8,000 persons or more. In 1890 the second of the two rules excluded 443 centers of population, containing an aggregate of 18,235,670 inhabitants, or 29.12 per cent of the whole.

The whole country, less the parts excluded by the first rule, the census office has divided with reference to certain *maxima* and *minima* of population, as follows:

2 to 6 to a square mile.....	592,037 square miles
6 to 18 to a square mile.....	394,946 square miles
18 to 45 to a square mile.....	701,847 square miles
45 to 90 to a square mile.....	235,148 square miles
90 and above to a square mile.....	24,312 square miles
Total	1,947,287

The superintendent of the census makes some interesting remarks upon the economical signification of these statistics:

These limits define in a general way the extent and prevalence of various classes of industries. This first group, two to six to a square mile, indicates a population mainly occupied with the grazing industry or a widely scattered farming population. The second group, six to eighteen, indicates a farming population with systematic cultivation of the soil, but this either in an early stage of settlement or upon more or less rugged soil. The third group, eighteen to forty-five to a square mile, almost invariably indicates a highly successful agriculture, while in some localities the beginnings of manufactures have raised into this group a difficult farming region. Speaking generally, agriculture in this country is not carried on with such care and refinement as yet to afford employment and support to a population in excess of forty-five to a square mile. Consequently, the last two groups, forty-five to ninety and ninety and above to a square mile, appear only as commerce and manufactures arise and personal and professional services are in demand.

He might have introduced education with equal propriety. The statistics given throw a direct light upon school material and an indirect one upon school resources. Much the same may be said of churches and the intellectual and moral instruments of society generally. There is, therefore, cause for deep regret that such large areas of our country are falling off in population. From 1880 to 1890 more than 400 counties, or about five times as many as there are in the State of Ohio, suffered in this way.

But, secondly, the character of the population must be considered as well as its number. It is evident that a certain homogeneity is very conducive to public education. The children of such a community can be educated together, and hence more cheaply and more effectively. One system of schools suffices for all classes. But if the children must be congregated in different schools according to non-educational tests, one of two things will certainly happen. Either public education will become expensive, or it will become inferior in quality. Looking at the subject from this point of view merely, it is unfortunate, that, in such large portions of the United States, popular education should be embarrassed by the race question. In 1890 the per cents of white and colored population respectively were distributed in the five great divisions that the census office recognizes in the following manner:

	White.	Colored.
North Atlantic States.....	98.4	1.6
South Atlantic States.....	63.2	36.8
North Central States.....	98.0	2.0
South Central States.....	68.3	31.7
Western States	94.8	5.2

If per cents for the states severally were given, the contrasts would be still more striking. The per cent of colored people in New Hampshire, for example, was .18, while in South Carolina it was 59.87. Now, there is little probability that the educational value of such statistics as these will be exaggerated. The presence of a large colored population in any community tends to affect popular education unfavorably in three ways. It increases its cost, makes its quality inferior, and lowers both the intellectual and moral level of society and its money-earning capacity.

In one respect, however, the rural parts of the country are better off upon the whole than the cities. Religious differences do not disturb popular education to the same extent. Relatively, parochial schools are much fewer in number.

In the third place, the wealth of society is a very important factor in education, and particularly in rural education. Naturally, the

per capita wealth of the several divisions of the country varies greatly. In 1890 these were the averages:

North Atlantic States.....	\$1,132 per capita
South Atlantic States.....	519 per capita
North Central States.....	1,129 per capita
South Central States.....	583 per capita
Western States	2,250 per capita

In the North Atlantic States the maximum was in Rhode Island, \$1,459 *per capita*; the minimum in Maine, \$740. In the South Atlantic States the maximum was in Maryland (excluding the federal district), \$1,043 *per capita*; the minimum was in South Carolina, \$348.

Now, it is perfectly well understood that a modern system of state education can be supported only at great public cost. Still more, the cost is all the time increasing. Our total expenditures for this purpose the last twenty years have been mounting upward by leaps and bounds. At present the money expended by the states together is \$175,000,000 annually, which is more than twice the cost of supporting the national government before the civil war. Education has come to be a great item in the budget of every highly civilized country in the world.

Fourthly, the character of the population in respect to its money-earning power must be taken into account. The size of the average family, the relative number of taxpayers or adult males and their productiveness as economical agents, all become educational factors of much importance. If families are large, the number of children to be schooled is proportionately great; which, under some conditions, would add to the efficiency of the schools, and under other conditions would increase their cost. Then the larger the relative number of adult males and the greater their producing power, the higher their intelligence and educational needs, and the greater their ability to provide the sinews for educational warfare. We need not enter upon the correlation of the size of the family and its material condition. It still remains true, however, to-day as in the time of Solomon, that the destruction of the poor is their poverty. In respect to educational possibilities, there is the greatest difference between a community having a high ratio of adult male population of large wealth-producing power and a community having a small ratio of such population with small wealth-producing power. The country taken together in 1890-91 showed surprising variations in this respect. There were 91.4 taxpayers for each 100 children six to eighteen years of age; but in different sections the ratio varied from 65.9 to 100 in the South Central States to 156.7 to 100 in the Western States. In South Carolina there were fifty-five adult males, thirty-two of whom were colored men, to earn the money with which

to school 100 children. Comparing the taxpayer factor with the *per capita* tax for education, some very striking results are obtained. Dr. Harris has shown,* that, in Montana, a contribution of \$5.85 per taxpayer furnished, in 1890-91, \$16.02 for each child of school age, while in Texas a contribution of \$6.55 per taxpayer produced a result of only \$4.48 for each child. Mississippi, after raising per taxpayer about half of what Nevada raised, had only about one-eighth as much as the latter state for each child of school age. The causes that affect the ratio of school children to the adult population are beside the present inquiry. But it is perfectly obvious that this is an educational factor of much value.

Little logical acumen would be required to see either the educational value or the social congruence of such factors as (a) the wealth *per capita* of the country or any state in it, (b) the expenditure *per capita* for public education, (c) the expenditure for the same purpose per pupil in the schools, and (d) the per cent of illiteracy, taking the population ten years old and more into the account. These items are shown in the following table:

	a	b	c	d
North Atlantic States.....	\$1,132	\$2.76	\$23.65	6.2
South Atlantic States.....	579	.96	8.25	40.3
North Central States.....	1,129	2.81	19.96	6.7
South Central States.....	583	.98	7.59	39.5
Western States	2,250	3.55	34.03	11.3

It must be remembered, however, that these educational statistics are now several years old.

Perhaps I should observe that statistics may be taken too seriously. We need not now examine the argument by which Mr. Buckle and others like him have sought to show that man has no free agency, but that society is governed in all its movements by laws as fixed as those of material nature. It answers the present purpose to say that the highest state of education is not always found in the most populous, the richest, or the most homogeneous states.

France is much richer than Germany, but she is inferior in education. England is far richer than Scotland, and has been behind her in schools of popular education since the time of John Knox. Rhode Island is the richest and most populous, relatively, of the North Atlantic States, but she has never led the American common school column. There are other factors than those that are distinctly sociological which enter into the problem. Educational traditions and ideals, public spirit and force of character, all tell. At the same time, it would be the sheerest folly to follow this line of argument to the extent of excluding or belittling the material factors that enter into public education and all similar social interests.

*Report by the Commissioner of Education, 1890-91, page 24.

The line of argument followed in this paper is sustained by the Michigan statistics of illiteracy, collected by the state census office in 1894. Three groups of statistics drawn from the published bulletin will be given.

1. Ratio of the total population of the state ten years of age and more unable to read and write, thirty in 1,000.

Ratio of the native-born population in the state ten years of age and more unable to read and write, twenty-one in 1,000.

Ratio of the foreign-born population in the state ten years of age and more unable to read and write, eighty-four in 1,000.

These ratios cause no surprise, and call for no particular comment.

2. The ratio of foreign-born persons ten years of age and over in the state who are unable to read or write and the number of such persons in the cities of the state were practically the same, viz., eighty-four in 1,000. Nor does this result create surprise.

3. Ratio of native-born population of the state ten years old or more unable to read or write, twenty-one in 1,000.

Ratio of the native-born population of the cities of the state ten years old or more unable to read or write, fourteen in 1,000.

On this basis, the showing against the state as a whole compared with the cities taken together is fifty per cent. But if we set the cities against the remainder of the state, or the rural districts, the showing is more favorable for the one and much more unfavorable for the other:

Ratio of the native-born population of the country districts ten years old or more unable to read or write, twenty-four in 1,000.

Ratio of the native-born population of the cities ten years of age or more unable to read or write, fourteen in 1,000.

The ratio in the country districts is seventy per cent greater than in the cities. If the country rate of illiteracy could be reduced to the city rate,—or, what is the same thing, if the country level of intelligence, as measured by this test, could be brought up to the city level,—the number of native-born illiterates of the given age would be reduced about 8,000.

These last rates are certainly not in accordance with prevailing opinion. How far they are supported by the statistics of other states I am unable to say; but there can be no doubt, that, as measured by the reading-and-writing test, the rural districts of Michigan are quite behind the cities. It might, perhaps, be said that Michigan is comparatively a new state; that much of it is thinly settled; that it contains large lumbering and mining districts; and that these facts explain the greater illiteracy of the country. Fortunately, we are able to follow the inquiry into the counties, and ascertain the

exact situation. The fact is, that, in the oldest and wealthiest parts of Michigan, the cities as a rule surpass the counties as wholes in respect to popular intelligence. The city of Detroit ranks distinctly higher than Wayne county, in which it is situated, and the same may be said of the cities of Grand Rapids and Ann Arbor as compared with Kent and Washtenaw counties.

No doubt several facts enter into the explanation of this state of things, but the most important of them is the inferiority of the schools.

My attention was first called to the subject of rural schools and education about twenty-five years ago. Soon after a series of charts showing the more important educational statistics of Ohio, prepared by Dr. T. G. Mendenhall, was exhibited at Philadelphia in 1876. I was particularly impressed by the chart showing the size of the schools in different parts of the state. Then, in the Western Reserve, where social conditions affecting schools began to change as early as 1850, I had right around me one of the most impressive of object lessons. I publicly urged the consolidation of schools as a means necessary to meet the new conditions. I shall venture to quote a few sentences from an address that I delivered and published in 1878:

Centralization is the only remedy for this state of things. There must be fewer school officers, fewer schools, fewer teachers, and more pupils in the school. You cannot have a fire without fuel or school without scholars. The Western Reserve Yankee is very conservative. Having always had a schoolhouse on the corner of his own farm or of his neighbor's farm, he cannot reconcile himself to the idea of sending his children to school three or four miles away. But in many places it must come to that in time; in such towns [as those mentioned] the children will be taught in consolidated schools or not at all. People will not long be so absurd as to keep up a district school for three scholars. When they make up their minds to the inevitable, which is in this case also the desirable, they will find that the necessary steps are both few and short. It will be found both cheaper and better to carry the children to the distant school than to go on in the old way.

It is with no little satisfaction that I now hear that the Western Reserve is beginning to move in this direction. The necessary legislation has been procured in several cases, and the schools of several towns have been more or less consolidated. Old buildings are abandoned if necessary and new ones built. The schools and teachers are much reduced in numbers and greatly improved in quality. A competent correspondent on the ground writes me as follows: "We carry the children to and from the school when necessary in closed hacks hired at public expense. We get the inspiration that comes from large numbers; we can classify according to the advancement of the pupils; we are able to have a much better grade of teachers without any increase of taxes; we secure a more uniform attend-

ance, and the children are never tardy; the instruction is at once better and cheaper." He adds that some people are opposed to the movement (people who are always opposed to new methods to meet changed conditions), but the opinion is spreading that the country district school does not measure up to the educational demands of the time.

This is progress. There is little more reason for having eight or ten district schools in a sparsely populated Ohio or Michigan township than there is for having an equal number of churches belonging to each one of the leading religious denominations.

DISCUSSION.

SUPT. LAWTON B. EVANS, Augusta, Ga.—It is the nature of people to segregate into communities. Man is the most gregarious of animals. His social instincts and capacities impel him to build cities and enjoy living in them. This explains the ambition of the American youth to live in a big town. Our American idea has been to make our cities so great, so beautiful, so attractive, and so full of opportunity that everybody will desert the fields and farms and move right in.

The educational thought of our age has been directed toward the improvement of city school systems. So we hear of the great schools at Boston, Chicago, New York, Cincinnati, Philadelphia, and a score of other places, but I am yet to hear of a single county or township of rural population the excellence of whose schools entitles them to national reports. The emphasis of our thought has been placed long and devotedly on city schools to the expense of the rural schools.

It is true that cities are the centers of highest civilization. Our human nature has made them so. Architecture, art, literature, schools, fashion reach their highest forms when people strive with each other for display. The very contact of people civilizes them.

Cities are likewise the centers of greatest iniquity. The worthless, the idle, the contentious, the wicked gravitate toward large centers. Extremes of virtue and vice meet. The force of cities is centripetal, and attracts everything good and bad alike.

But cities do not develop individuality. There is a leveling influence about them that merges individuals into masses, and it is only occasionally that a volcanic genius will break through the hard crust and rise up out of the burning level of great city life. The highest types of individuality—the strong and independent men of our nation—have been born and bred in village or rural homes, away from the turmoil of city life, in quiet and serious communion with Nature in her grand and ennobling forms.

Now the largest and most important part of our population lives outside of cities. It is the people of the villages and farms who produce the food, and raise the cotton, and fell the timber that forms the basis of our commerce and manufactures. The rural population must always be the bone and sinew of any country.

We need skilled labor in the fields as well as in the city. We need intelligent and scientific management of a farm as well as of a great factory. We need business methods here as well as in the great commercial houses of the city. We need

economy of effort, and conservation of force, and adaptation of invention and discovery here if we need it anywhere. And we need culture and refinement among the country people. Music, painting, books, and all the evidences of a higher kind of life are as proper on the farms as in the cities. The more highly educated the people of the rural districts are, the more capable they will be of taking advantage of the improvement in machinery, of economizing time and labor in producing raw material, and the more time they will have to devote to culture and the higher arts of civilization. They will reach the same results as now in less time, and will live more comfortably and more happily.

That farm life is behind city life in development is due in some part to the isolation of the rural population. Men live too far apart and see each other too seldom to exert a refining influence over each other. In other part, it is due to the attention that has been given to educating the people of the city.

It is quite time that we change the emphasis of our study, and turn aside from the contemplation of the excellencies of our city schools and consider the necessities of our rural schools.

The wisest policy is to frame some educational scheme that will keep the people in the country; that will stop the exodus from the farms; that will make the rural population content; that will make them enlightened and prosperous.

I believe very firmly that the county or township is the proper unit of educational organization. If one system of schools can be made to extend over a whole county, including the city and villages, the organization will be upon the basis of territory. By this means the entire country can, after awhile, be brought under uniform organization. So long as the organization is by cities, we merely organize by locality, which can never be uniform nor entire. It will always remain a one-sided development.

A proper policy is to induce the people hereafter to organize by area rather than by spots. The effect of this will be to give to the rural child the same school advantages as to the city child, and there is every reason in equity and good sense why these advantages should be the same.

I come from an illustration of this kind of organization, and it may not be amiss to let you know something of the schools of Richmond county, Georgia, in which county is situated the thriving city of Augusta. Here, for the past twenty-five years, has been in operation what is known as the county system.

One board of education, composed of representatives elected by the people for a term of three years, one-third of the membership expiring every year, has charge of the entire school interests of the city of Augusta and of the county of Richmond. This board of education has the unique power of levying a school tax directly upon the people of the county, without revision by any other authority and without any limit as to rate or amount. The school tax is levied and collected at a uniform rate upon all property of the county, whether it is in the city or out of it. This forms the general school fund of the county.

When it comes to the distribution of this fund, no regard is paid to the amount raised by any ward of the city or any district of the county, but the fund is distributed according to the necessities of each ward and district, determined by the number of children to be educated. The school fund of the whole county is raised by a tax on all the property of the county, and is distributed upon the basis of the school population of each community. Thus it happens that a community rich in naught else but children will get a flourishing school, paid for by their wealthy but less fortunate neighbors.

As a matter of fact, a large part of the money paid by the city is annually spent in the rural districts, for the city has nine-tenths of the taxable property but only three-fourths of the school population. So it happens that the rural schools pay

one-tenth of the school tax and receive the benefit of one-fourth of it. Augusta has spent in the past twenty years the sum of \$200,000 in building schoolhouses and paying school teachers for the children who live in the country districts around her. Augusta has shown her faith in the proposition, that every city needs to be envired by an intelligent, industrious, and contented population.

When it comes to teachers, the same qualifications are demanded for rural schools as for city schools. Upon the regular examination terms and upon the issuing of licenses to teach an applicant does not know whether he will teach in the city or out of it, and to many it is a matter of indifference. And I know whereof I speak when I say that there are young women graduates of normal colleges doing high grade work in country schools ten miles beyond the limits of the city, and doing it happily and cheerfully. We believe firmly in the further proposition, that a country school is entitled to as good a teacher as a city school, and that those who live in the fields are as deserving of education as those who dwell beside the asphalt. Carlyle must have had a country child in his mind when he said, "This I consider a great tragedy, that one soul should remain in ignorance that had capacity for higher things."

The teachers are treated as nearly alike as can be. City and country teachers are paid about the same salaries. They get it at the end of every month and on the same day. The certainty and the regularity of a fixed compensation creates a sense of security, safety, and comfort in a teacher, and accordingly increases his efficiency. No teacher can do his best work where he works at starvation rates, is paid once every three or four months, and often in scrip that he must discount. There is much philosophy and also economy in the maxim that advises us to pay a public servant well and watch him closely. So we make no distinction of locality. First-class work is worth as much twenty miles from town as it is in the heart of the city.

So far as length of term is concerned, the schools all run nine calendar months. They all begin at the same time and close at the same time. During the last year every child of the county, regardless of where he lived, was offered nine months of actual tuition.

So far as schoolhouses are concerned, these are located in rural districts so as to be on an average of four miles apart. No child is out of walking distance of a school, running nine months in the year, and taught by a good teacher. These houses are owned by the board of education, and cost from \$300 to \$2,500 each, according to size and equipment.

One superintendent has charge of all the teachers in the county. The same degree of efficiency that should attend the supervision of city schools is likewise extended to the country schools. One expert for all is the theory, and so far as human effort can avail is carried out in practice. The same course of study is prescribed for the pupils, and the same course of professional reading is required of the teachers. The teachers of the city schools meet for instruction once a week. The teachers of the country meet once a month, and in addition have a two months' institute in the summer months.

This, in brief, is the outline of the plan of organization of the schools of which I assumed charge thirteen years ago. That it has its defects of management and its grave faults I am prepared to admit. These I need not enumerate at this time. Suffice it to say, that no one knows what they are, and that they are, more surely than I do. What institution devised and controlled by an imperfect humanity is without the faults that are incident to us as men? That our system is projected upon the proper theory, for all our population, and for all the boys and girls under our tuition, I firmly believe.

There are two other systems in Georgia organized upon a similar plan, one for Savannah and the county of Chatham and the other for Macon and the county of Bibb. Because it is rather unique and interesting, and presents some phases of the rural problem worthy of your consideration, is my sufficient excuse for presenting it to your attention.

W. W. PENDERGAST, Superintendent of Public Instruction of Minnesota.—“What can be done for the improvement of our rural schools?” is constantly asked and never satisfactorily answered. The fact that they are in a condition which needs help; that they are far below the city schools in good management, has never been seriously questioned. And yet there is much to be said by way of qualification, for during this half century these same rural schools have continued to furnish the best brain and muscle of the country. Whenever the teaching force in the cities gets below par an infusion of fresh blood from the country is depended upon to bring it up to its normal level. The best business men in all the great marts of trade, the clerks in the wholesale and retail stores who are the most reliable or who give the best satisfaction, almost invariably come from these schools. Patriotism is here so instilled into the minds of the boys that it finds a permanent abiding place. Yet the yearly terms of these country schools are little more than half as long as those in the city, while the disparity in the rate of taxation is so enormous as to be absolutely appalling. In our own state, for instance, the great cities build the best schoolhouses in the world, secure the highest priced teachers, furnish the most approved equipments, for a special tax of about two to four mills on the dollar, while in the outlying districts a special tax of twelve to twenty-five mills is by no means uncommon. Still the best scholars in our high and normal schools to-day are those who come from these high-taxed, struggling districts. Principals and superintendents of the best graded schools in the state say that it is of the greatest advantage to have these boys and girls for examples of studiousness and good scholarship. Though in the country the yearly terms are short, the pupils attend for a purpose, and make the most of the limited time allotted them.

The welfare of the school, the advancement of the scholars, the words of commendation from their teachers, their own consciousness of mental growth, all stimulate them to further and higher efforts. During the vacations the coming school term and its work are discussed, so that when a scholar enters school he knows what to do and sets about it with a will, knowing that “A work well begun is half done.” In the country each pupil is intimately acquainted with all the others, and not only with the pupils themselves but with the parents. All the families enjoy this close intimacy, and there is a generous and healthful emulation continually pushing them forward to nobler effort and inspiring greater zeal. The mixing up of all grades in one room is not altogether without its compensations. It is of great advantage to the younger pupils to hear the older ones recite, and many a young pupil has felt an incentive to be something higher and better as he sees what the best scholars in the school have done before him.

Farmers' children have other work to do outside the schools. This needs brain power and good judgment. Their fathers and mothers cannot always be with them; a great deal is left, not only for them to do but to determine how to do. At first many mistakes will be made. They will notice these mistakes themselves, or, if they do not, their attention will be sharply called to them, and their next plan must be one that will avoid such disasters. So, when out of school, they are constantly strengthening judgment, which is the supreme end of all education. If “nature is the basis,” then the children in the rural districts have a wonderful advantage. The fact that they are in a position to do more work in a given time is, however, no reason why the term should be shortened. Rather should those schools be favored which show the best percentage of returns.

In what has been said, I do not mean it to be understood that the country schools are doing better work than they would if they had greater advantages; for instance, if they had more months of school in a year, if they had better teachers, better schoolhouses, better equipments. I have been trying to show that there are some things in their favor of which they are not slow to take advantage. The great difficulty in their way is the burden which the schools impose compared with that which their neighbors in the cities are obliged to carry. The difference between a rate of four mills and fourteen mills is altogether too wide, and as these boys and girls are all the children of the state, the state should do much more than it does now in the matter of their education.

Till within a few years Minnesota simply compelled the districts to educate their own children. But this was very unfair, for the reason that in one part of the state the cost is, as we have seen, many times as great as in another portion, while the children of that particular locality are not expected to, and as a matter of fact do not always, or even generally, spend their after lives in the little three-mile-square district where they received their early education. The best of them are called for in all directions. We see streams of them from every county flowing toward the city, but we look in vain for any reflux tide. It is fair, then, that the state itself should carry a large part of the burden of educating these children. The country schools need less pity and more justice and fair treatment. The general government should appropriate about one dollar for every pupil who attends school three months in any public school district in the United States; each state should raise two mills to be apportioned in the current school fund; each county should also raise two mills, and each school district should sustain an eight months' school, provided it could be done without making the district rate, including the state and county school taxes, over eight or ten mills, which should be the limit. But if any rate less than this would not give them the full term of school, each district should levy that amount, and hold a school as long as the funds so raised would allow. Should this yield more than required for current expenses, the surplus could be used for buildings.

There must be some plan for more thorough and more frequent supervision. This can best be brought about by a provision that a part of the appropriation made by the general government be devoted to this purpose. Localities cannot be depended on to levy taxes for what seems to them a comparatively useless expenditure, but they would gladly welcome it if given by the government.

It would be of the greatest benefit to have the teachers selected by those who are thoroughly acquainted with them, their qualifications, and their peculiarities, and whose judgment would decide where each one should be located.

To sum up, then, the great need of the country schools is ample means for carrying on those schools properly. The results already attained under present financial straits are but an earnest of what might confidently be expected with those embarrassments removed. A larger fund could be used most beneficially to secure a more extended supervision, more intelligent selection of teachers, more useful apparatus, more school libraries, better equipments of all kinds, and longer school years.

All this can be successfully brought about by the coöperation of state and national government.

SUPR. A. K. WHITCOMB, Lowell, Mass.—The State of Massachusetts has done much for its rural schools through its half dozen agents of the board of education, who spend their whole time visiting schools, holding institutes, counseling with teachers and school committees, etc., and by the judicious distribution of the income of a state fund which now amounts to several million dollars. I have, however, only time to speak briefly of one measure which is, so far as I know, peculiar to the Bay State, and which seems to me to be of great importance. I refer to the

state's system of district superintendence. By a law passed in 1888 any two or more towns (the latter being with us what would, I think, be called townships in most states), the valuation of each of which does not exceed \$2,500,000, with an aggregate of not more than fifty nor less than twenty-five schools in all, may unite in the employment of a superintendent, towards whose salary the state will contribute \$750. It is provided that the district shall pay at least as much more, so that the superintendent's salary cannot be less than \$1,500, and may be as much more as the towns choose to pay. As a further inducement to towns to unite in such districts the state appropriates an additional sum of \$500 to be used in paying for better teachers and longer terms. This offer has proved so attractive that all except a few of the smaller towns have accepted it, thus bringing more than ninety-one per cent of the children of the state under the direct care of a superintendent who gives his whole time to the work. The salary is such as to pay for ability and professional training. From personal knowledge I can testify that these superintendents are among the brightest and most energetic schoolmen of the state, and their zeal has already largely revolutionized the teaching in the rural schools. The increased demand for normal schools which is to give us five new ones in the immediate future is largely due to their appreciation of the value of professional training for their teachers. Under their persuasive influence upon committeemen wages have been increased, better teachers are obtained, and their tenure of office has been lengthened; new methods have been introduced and courses of study have been improved; teachers' institutes, meetings, and reading circles have multiplied; schoolhouses and school books have received more attention, the per cent of attendance has been considerably increased; and, in short, their influence, exerted in more ways than I have time to mention, has already effected a marked improvement in the rural schools of the state, and is bound, I think, to do still more for them in the near future. I commend this Massachusetts system, therefore, to the favorable consideration of all who are interested in the welfare of the rural schools.

SUPT. H. SABIN, Des Moines, Iowa.—The great trouble in connection with rural schools all over the land to-day is the low state of public opinion. Our efforts will be futile until we contrive some way to stir people up to the magnitude of this question. Every child in the land is entitled to the best school privileges possible under the circumstances, without regard to race, creed, sex, or color. We need in every state men like Horace Mann to go among the common people and preach the gospel of education. Nothing deterred him from his work; nothing turned him aside from his mission. As, for instance, when he went to Pittsfield, and found no hall ready,—no preparations for his meeting,—he called upon Governor Briggs, and together they found rooms, swept the hall, and arranged the seats, and made fires. And when it was time for the address to begin, a respectable audience found comfortable surroundings. This was a fair specimen of the zeal and determination which characterized his work.

SUPT. EUGENE BOUTON, Pittsfield, Mass.—Superintendent Sabin has made mention of Pittsfield, Mass., in the days when its famous Governor Briggs had occasion to assist Horace Mann in sweeping one of its schoolrooms for a teachers' meeting. You will, I trust, permit me, as the representative of that beautiful and cultured city, to say that it has, during the past year, shown its appreciation of education by authorizing the expenditure of nearly \$300,000 for the erection of new schoolhouses. One of these is to bear the name of the high-souled governor who did not hesitate to forward the cause of public education by the lowliest service when the advancement of that cause demanded such help at his hands. While tendering the regrets of my city that its janitor did not in those old days show more consideration for the eminent educator who honored it by his presence, permit it to congratulate itself that the neglect was remedied by its most distinguished

citizen, one of the noblest and most honored chief magistrates that the commonwealth of Massachusetts ever had, and that the seed then sown has produced so abundantly.

The subject under discussion seems to resolve itself into two divisions, taxation and supervision. In reference to taxation, I think that the area contributing to the support of the schools should be large enough to secure reasonable equality of burdens and a fairly equal distribution of means for the support of the schools. Whatever plan will best secure these ends would seem to be the best one to follow. It is not necessarily the county system. One county may contain a large city and abundant wealth, like the county of Richmond in Georgia, and next to it may be a county as far inferior to it in taxable property as the ordinary rural township is poorer than the average city. It is not evident, therefore, that the support of schools by the county system will, of necessity, secure more uniformity of burdens and means than taxation under the township system. In either case, there is likely to be a nearer approach to equality of burdens and means if the entire state constitutes a supplementary area of taxation and if the weaker schools of the state are aided by the funds thus derived.

In reference to supervision, it is evident that the best results will not be secured if the area is too large to be properly covered by the supervisor. The average county is too large for close supervision by one person. He may be able to give proper attention to the schools of two or three townships or a city of moderate size. But the average county is certainly a much larger area than one person can supervise closely enough to secure the best results.

SUPT. JOHN D. WORTHINGTON, Public Schools of Harford County, Maryland.—It seems to me there is no feature of the valuable paper read by Dr. Hinsdale so worthy of consideration as the emphasis he lays upon the need of larger and fewer rural schools.

This is a problem not met with in maintaining city schools, but there are various ill-digested reasons which prompt the ordinary country patron to desire a school at the end of his lane. Such schools are ruinously expensive for even the lowest grade of service. I recall in my own county a school, made necessary by the topography of the surrounding country, which enrolls twelve or fourteen pupils, and costs per capita fifty per cent more for the very cheapest service than the town school some two miles distant, although the latter enrolls 450 pupils, and commands an able corps of teachers.

Much money is saved if the school authorities are empowered to pay for the transportation of such pupils to the adjoining school, while the advantages of being under a strong teacher, having the benefits of competition in class and the ennobling influence of a wider range of fellow students outside, are beyond measure.

The country school bears a very different relation to the people it reaches from the city school. It is second only to the church frequently found by its side. It is the center of all the best influences which help to uplift its people. Hence, its opportunities for good will increase in the same ratio as its ability increases to command a strong teacher and a complete equipment, build up its circulating library, and draw to it as a common center the best people of its section.

The proper section to tax in order to furnish necessary means to support country schools is of the first importance. Many a school district is too poor to support its school alone; it must have outside aid or the school will be a feeble one with a short school year.

The first unit of taxation should be the state. Since the state establishes a system of free education because she cannot afford to have her control in the hands of illiterates, it is no hardship that all her citizens should contribute the minimum amount of tax, to be distributed throughout the whole state in proportion

to the school-going population. And to the extent that she commits herself in a general way to the task of furnishing free education, she should exercise a general but not a scrutinizing supervision over the grade of teachers to be employed, the course of study and local management. The territory is too large and the people too varied in birth, occupation, wealth, and environment for her to go farther than this.

But just as the state is too large a working unit, so the borough or township is too small to yield the best results, and poor sections will inevitably find themselves unequal to the struggle. On the other hand, the county generally contains a unified people, and is not so large in area that it cannot be personally managed by one school board and overlooked by one active superintendent.

He is the proper official to supplement the work of the state normal schools in furnishing teachers, and if his certificates are graded according to scholarship shown at his examination and classified according to professional skill shown in the schoolroom (salaries to depend upon both of these) the best method will be pursued to secure good teachers.

One error, it seems to me, is made in the system outlined by Superintendent Evans. The expense of living in large towns and cities is so much above that of purely rural districts that salaries there should be sufficiently raised that a city teacher's net income might equal a rural teacher's. Otherwise the system is the same as that which prevails throughout the State of Maryland, and I believe it is the true way to meet the rural school problem. From it may be expected absolute uniformity and a fair degree of unity.

DR. HINSDALE (in closing discussion): I regret that the discussion has taken in part the trend that it has taken. What has been said about the comparative merits of the Maryland and the Pennsylvania systems is all interesting, but it does not touch the heart of the question. It is idle to suppose that the state school systems can be made uniform. A state school system to be efficient and useful must rest directly upon the political organization of the state. The people of a state will, and in fact must, use the same organs for carrying on their schools that they use for other public purposes. The New England States make large use of the town and small use of the county for all such purposes. Virginia, and the Southern States generally, make large use of the county and no use of the town whatever. In the New England sense there are no towns in the South; or townships, as we say in the West. The old Middle States and most of the Western States lay less emphasis upon the town or township and more upon the county than the New England. They lay less stress upon the county than the South. These three methods of local government are known to writers on institutional subjects as the town, the county, and the mixed systems. Now it is idle to think that these facts can be set aside in dealing with public education. The states will in general make their educational systems on the administrative side correspond to their systems of administration as a whole. Hence there will continue to be, as there now are, three groups of school systems, corresponding to the three systems of local government. This point of view it is important to grasp; for if the reforms of rural education must be postponed until the states can be made to agree in these respects, then it will be postponed indefinitely. Touching for a moment the more practical side of the subject, I will say, that, to my mind, the most important practical questions to be considered in connection with improving the rural schools are two in number. First, to throw the burden of public education much more heavily than heretofore upon the states considered as units and less upon localities. This may not be necessary in some states, but in the majority of states it is a crying necessity. The second question is to effect a reasonable consolidation of country schools, as was insisted upon in the paper read at the opening of the discussion this afternoon.

THE UNIVERSITY AND THE STATE IN THE SOUTH.

BY EDWIN A. ALDERMAN, UNIVERSITY OF SOUTH CAROLINA.

The southern half of this Union has, for a quarter of a century, been the battle ground of a great social conflict between the forces of an ancient, unique, and forceful civilization, bred into the bone of the people, and the new and strenuous influences of modernism and innovation. This revolution has been comparatively free from violence and haste. Thoughtful men at a distance and thoughtful men on the scene of action have failed to recognize the deeper meaning of the transition at play about them. They have, indeed, beheld some new and strange things, such as old leaders losing their followers and new leaders rising among the people. And they have heard a very babel of voices, some frantic, some callow, some sordid, and a few nobly and truly wise.

Something out of the ordinary was needed to embody in a graphic and impressive way the permanent elements in this large movement.

Those of us who were fortunate enough to stand in the plaza at Atlanta this fall and to behold that noble display ranged about the Piedmont hills,—the work of former master and former slave,—felt that we were in the presence of a mighty herald crying to the world the triumphant culmination of the labor of a ruined and conquered people, and proclaiming to all men that the long slumbering land, freed from hindering tradition and the paralysis of war, had enrolled itself at a bound among the great industrial democracies of the world.

The direction and elevation of this social new birth is the surpassing duty and function of all educational forces, and more especially of the higher education in Southern life. Whether there shall issue from the conflict an enlightened civilization, blending the loveliness and charm of the old with the vigor and freedom of the new, or some unhappy system made up of crudities and ancient prejudices, is the task set for this generation of Southern educated manhood.

Isolated, individual, conservative, the South of the past held itself proudly aloof from the ferments of modern society, went its own way, and created its own dominant, dramatic order. This order was a system of contrasts, and lights, and shadows. It produced neither wealth nor letters. It dishonored labor, arrested immigration, minimized invention, unified industry, and exalted caste. The academies and private schools of the time, conducted by scholarly

and devoted men, were numerous and effective—indeed, almost perfect—instruments for the purposes of the time; but the common schools, branded with the burning badge of pauperism, could not thrive. Yet there issued from this order the smallest, the alertest, the most powerful political force in Christendom. The American Union had sprung from their brains, had been maintained by the valor of their arms, and had extended its territory under their guiding hands. By a strange historic paradox the causes of their weakness became as well the causes of their strength. The dangers and antagonisms of a militant labor system made them masterful in action and persuasive in speech. Baronial life, with its leisure and inherited overlordship, made them as simple as shepherds and as proud as kings. In the placid air of their enlightened mediævalism lingered the brave old ideals of courage, and beauty, and gracious dignity. There was but one overshadowing Southern question then, and this for its treatment did not so much need universal thrift and the spirit of gain and growth as it did character, principles, oneness of purpose, and chivalric codes of conduct. Hence all the forces of the time concentrated on these lines, and there arose an assertive, sensitive, dauntless race of men, esteeming life less than honor and loyalty more than gold; who wrought with a sad, titanic sincerity for their doomed cause, withholding nothing, compromising nothing, until the mighty struggle wore to its sublime and pathetic close at Appomattox.

The great war, in the mystery of historic forces, freed the white man, rolled away his burden, and enrolled the South in competition with the great industrial democracies of the world. Its problems, no longer direct and primitive, are their problems, intensified by the painful processes of social transformation. The old individualism has given place to combination and capitalism, servile labor to free labor, and with this the best products are to be raised, the best goods manufactured, and the best routes to market devised. Our first work is to possess the land and subdue it. The law of the passage of society from the patriarchal to the economic stage necessitates the higher organism, the subtler brain, the more cunning hand. Hence, like a belated army, the South is seeking to conquer a place in material civilization; its dreamers become captains of industry and its doctrinaires lords of trade. Under this new goad to effort we are becoming builders of cities, producers of wealth; and both the dangers and opportunities that await us are the dangers and opportunities of an industrial state.

In the wake of this emancipation from the old subtle social creed that suppressed individual effort there are other wider issues. Perhaps the very widest is the wise and just guidance of the irre-

pressible instinct of Democracy, restrained for generations, now asserting itself in the upheaval of the plain people,—the Third Estate,—who are everywhere coming to the front, demanding their share in government and challenging the authority of the ruling class. Our untrained men are learning to govern by governing pedagogically and historically; a wise process, for that surely is better than to be governed and remain ignorant. The situation is not without great hopefulness. The rank and file of this popular uprising are the best material in the world for the making of educated citizenship. The Civil War revealed their value to the world and constituted their university. Its marches and dangers opened their eyes and gave them their outlook on life. They and their sons, the younger element in the movement, are men of unmixed English and Scotch-Irish blood; inheritors of the Anglo-Saxon consciousness; descendants of men who sacrificed peace and life for principle in three wars; keen-witted if untrained; their very excesses the result of boundless faith in the majesty of their government. The tasks awaiting adjustment by these men, sure to attain and hold power in the end, are enough to appall the wisest statesmen and profoundest social scientists—the remodeling of constitutions, the settlement of grave questions of suffrage and property, the reconciliation of classes, and greatest of all the problem of the two races.

The sentimentalists and partisans of the reconstruction period fancied that they had settled the question which had disturbed the dreams of Jefferson, which had perplexed and affrighted the national conscience through all its history and which had just evoked the mightiest moral energies of the century. But their solution was no solution. It was solemn opera bouffe. The problem had just begun and remains the transcendent sociological problem of the age. Rant will not dispose of it, nor ignorant gush, nor race prejudice, nor the philosophy of the sentimental and the remote; but it must work itself out on Southern soil by the wisdom of Southern men of both races. It must pass into the region of scientific study and investigation. The Southern scholar must make it his province in the still air of the university; the statesman and publicist must ponder it, and the capitalist may well reckon with it amid his gold.

What manner of men, then, does the South need in its coming life?

Perhaps in the past we set too much store by wise leaders and neglected to provide for wise followers. If so, the irony of fate is sporting with us, for now in the threatening danger of these great questions we are practically leaderless. The old type of leader, softened by fortitude and idealized by woe, has passed away, canonized by love and letters. The voluntary and occult forces of the times

are seeking diligently to fashion the new. Now and then we seem to get a glimpse of our leader—as when Henry Grady, with his golden tongue and free, spacious spirit, uprose upon the South—a radiant prophecy of its future manhood; but it is only a glimpse. The mere industrial man will not answer our need, though there are lands to be tilled and factories to be built, and the madness of exalting empty political preëminence above the science that will dignify labor and procure food can never again curse our life. The mere orator or politician or scholar will not do. There must be a complex of all these—the man of free spirit and constructive habit—the man of insight and effectiveness, of utility and beauty, of action and contemplation. He shall, above all, have faith and sympathy with the blundering masses and shall be endowed with that patient wisdom which can await the unfailing rectitude of public impulse and can keep its faith through unpromising days. Like Fitch around the king's council board or Luther to the burgomasters of Germany, he shall plead unceasingly and above all for education in the colleges and schools, in the press and in the public library.

If our laws and institutions are not to become the crude experiments of the ignorant or the bold devices of the corrupt; if the South is to outgrow years of economic misconception; if the teachers in our schools are to be true teachers, educated men rather than party chieftains or untrained place-seekers, they must lead our civilization. The potential of trained mind must constitute the test of true leadership in the South hereafter. The popular contempt for higher education and the popular pride in the self-made man is always widespread and strong among untrained people. The feeling is a sort of retribution upon scholarship and educated power for its cowardice and selfishness, but it is none the less defiance of common sense. The educated man may not always be in place, but he is sooner or later in power. The higher education is the dynamic element in the life of the community, invigorating the schools of the people, bravely struggling to elevate the common standard of living, supplying the state with its teachers in the schoolroom, the press, the pulpit, the family.

Out of the universities of the world have come its creative movements and men—religious freedom in the old world and civil liberty in the new. Modern Germany is the child of her universities and relies more firmly for her permanent power upon them and their 28,000 students than upon her invincible soldiery. Blot out the influences of Harvard and Yale and the colleges of the Atlantic seaboard, and what art can estimate the loss in moral elevation, practical power, or national character? The great Columbian Fair, with its splendor and beauty, will fade away as a dream, but its neighbor,

the university, will shape Western life for unnumbered generations. Wherever tyranny has sought to oppress the weak or ignorance to rule the wise; wherever the borders of light have needed to be enlarged or ancient and prosperous shapes of wrong to be cleansed from the land, the gray walls of the university have yielded up its spiritual battalions,—strong in the steadfast purpose and cultivated brain,—discoverers of thought, conservators of truth, stimulators of mind, sowers of seed that will bear fruit in a fairer time. The feeling is instinctive that men of this stamp and quality must serve a state in epochs of downfall and trial. Humboldt and Stein, the men of Leyden and the English of the Reformation, felt that times of national crisis and sorrow demanded that life should attain the highest standard, not only to prevent disaster but to insure existence. The South has not failed in this feeling, as its brave efforts to establish and maintain schools and colleges for both races quite eloquently show; but the needs of Southern society are so great, her young men seeking training are so countless, the work of all the colleges is such a fraction of what is left to be done, the disheartening rivalries and bickerings among the colleges themselves are such distressing proofs of the need of higher education, that it has seemed best for me to leave the questions of technique and administration to wiser men, and, even in this presence, to plead for the thing itself.

We are not all of one mind as to how the great need shall be supplied. Shall the organized state trouble itself about this matter, or shall it be left to private initiative? There are those who insist that this vital thing is not a concern of the states, whose highest functions they declare are symbolized by the policeman's club or the law's penalty. And then, there are the prosperous communities, with amassed wealth and settled material skill, who say to us that we must wait upon the impulses of philanthropy or the activities of the church for our educational foundations. But the nature of the state is at variance with the limitation of its powers to civic regulation, and the instinct of civic self-preservation decides against trusting wholly to individual generosity or ecclesiastical agencies for an universal social necessity. The state is not the government alone; it is the will of the people expressing itself in beneficent institutions as well as in penal or protective codes. The protective function of a state, indeed, may disappear as reason advances, but the loftier educational function will increase as social relations grow in complexity.

From the standpoint of right, there is no power to which the state can delegate its duty and power to educate, for there is no higher power than the state. If there is a higher power in the state than the state, then that power is the state. From the standpoint

of political common sense, the agent of social salvation should be at least as potent as the extent of social peril. Our social peril is superlative, involving education or migration or revolution. The most potent conceivable agent is the state, which is concerned about and surely is responsible for its own life. Therefore, it is the all-powerful state that must maintain itself against vital danger. If it be conceded that the youth of a commonwealth have the same right to be educated that they have to be free, then it must also be conceded that the state is responsible for and alone has the power to guarantee the granting of this sacred right. To those who concede the state's right and duty to educate in the primary education and deny it in the higher, it may be answered that an argument for any education is an argument for all education. If the state has a right to educate at all, it likewise has the right to determine the extent and character of that education. All knowledge is comparative, the higher education of one age becoming the lower of the next, and there can be no dead line in learning at which knowledge ceases to be good and becomes useless. The three "R's" are indispensable. But mere reading is not reading with profit, and the one is as indispensable as the other. Higher education simply means more education, better education, completer education for a completer life. It is not a cult for the few, nor a caste for the wealthy, nor a college for the exclusive. It is the training ground for the people, and is the essence of democracy in its purposes and results.

In my own state of North Carolina, up to the Civil War, there was a widespread feeling that the ruling class was confined to a few families of ability and wealth. In the early days of the century it was true, and necessarily true, for the influential and wealthy classes alone could command the advantages of education, and education finally rules. The enlightened policy of the modern state, knowing no class and knowing that those who most need help are least able to help themselves, cheapens the cost of this priceless thing and offers it to the aspiring of all ranks who feel within them the promptings of power and yearn for the higher life of useful action. As a result of this leveling process, introducing the higher test of fitness and ability, side by side in the various fields of endeavor and in the high places sit men of all ranks and all degrees of wealth advancing the life of the state.

Let me not be understood in pleading for the higher education as underrating the lower, for there is no essential distinction between the two. The state cannot be interested in one and not in the other, for they are one and indivisible. A system of education all universities and no primary schools would be a crime, as a system all primary schools and no university would be a farce. It is simply a ques-

tion of sequence. The educative impulse is from above downward and not from below upward, and the two impulses reinforce and enrich each other.

In the old Southern life in every hamlet and community were to be found men and women of the rarest culture, but all around, giving color and tone to the whole, moved the untaught throng. The supremest need of the new life is the lessening of this inequality by the presence, in large numbers, in all elements of the population, of men and women of thoughtful, independent mind, of trained consciences and habits and hands, who can bring things to pass. This can only issue out of the higher education reacting upon the lower, lifting the whole to a higher common level.

The permanent forces in this process are first and foremost the state universities and colleges supported by taxation and expressing the Christian tendency of the brotherhood of men, and, secondly, the endowed institutions supported by enlightened philanthropy. By universities I do not so much mean these vast and varied foundations whose chief aim is to extend the boundaries of thought, to add to the sum of knowledge, but those institutions which can aim to make broad-minded men of large views, high ideals, lofty patriotism, and scatter them over the land as salt among the people, an influence to purify and preserve,—centers of independence of thought and personal responsibility.

There is no call among us for a multitude of new foundations, unless it be for institutions for the training of teachers. We need rather to expand and enrich and liberalize the old foundations. There are two obstacles in the way of this result. The popular abstract hatred of taxation which enables the enemies of the state schools to confuse the thought of the people and to make them regard all taxation as a curse rather than as organized corporate wisdom, hallowed by Christianity, struggling to secure for the children a needful thing beyond individual power.

Secondly, the failure thus far in our development to find the golden mean between the individualism which preserves liberty and the individualism which paralyzes concerted action. Still partially rooted in our life is the fatal thought that every man should educate his own child, or leave him uneducated if it be his will or misfortune.

Emphasized by poverty, this conviction still stays the hand of giving and belittles the glory and gladness of helping others to help themselves. We will do well to labor and pray for the death of this sentiment. We would be mad to cease state effort and demand endowment at the point of a subscription list.

Bishop Potter, in a recent utterance, has declared that the darkest day for any people would be the day when they did not possess

an ideal university. And by an ideal university he meant any group of free, simple, unhampered men seeking truth for truth's sake; "waiting patiently on their bended knees before the shut doors of the Kingdom of Knowledge;" getting their only reward in the thrill of the human soul in its contact with verity; ignorant and careless of the moment when their theoretic truth merges into fact, and, in the form of mighty engines, or stately ships, or roaring looms, blesses the world. There can be no fairer picture on earth than this, and such men are indeed the aristocracy of the world. But there is one thing greater than truth, and that is humanity. The Southern university may well cherish this serene ideal and incorporate in its organization the creative impulse and the spirit of inquiry and investigation, but its first thought must be about its environment, out of which it must grow, and by which it must do its duty before it can erect a beautiful aristocracy of scholarship. Once we were aristocratic in government and education, but now we are democratic in both. At this stage of our culture, when millions are to be impressed with the importance of knowledge, the Southern scholar must forego his office of prophet and seer and become ruler and reformer. Southern universities and colleges must do the work of social regenerative forces, reaching out directly into the life of the people, making known how much better light is than darkness, and how sweet it is for the eyes to behold the sun—ennobling the poor man's poverty and spiritualizing the rich man's gold.

Let it be remembered that the future seems to belong wholly to democracy. Only a few of our universities can hope to unite both of the functions of the true university, viz., the making of pure scholars and the making of true leaders and missionaries in the great democratic crusade of arousing the intellect of a whole people.

Each institution should ask in which direction its duty lies. In the South both the opportunity and duty are equally clear and plain. President Dwight, Seth Low declares, claims that Yale has always been a school for captains. Southern universities must have the same aim—captains of industry, captains of thought, of civic virtue, of enthusiasm and faith; who shall testify to the people the value of intellectual pursuits and the beauty of truth; who shall restrain the narrowness of misunderstood creeds, and proclaim that education is for no particular class. And, finally, our universities must interest themselves in the things which interest the people, no matter how homely or prosaic or far removed from Olympus,—the negro's cabin, the factory child, the village library, the prices current, the home, the field, and the shop. We must teach the people and the people must teach us, and in this way we may hope to see high social and civic ideals possess the minds of the great majority.

I sometimes think that our brethren of the North and West do not fully comprehend how ripe the time is, and how hard the struggle for the fruitful doing of such work. Individuals and communities cannot be forced into power, or culture, or effectiveness, or skill. The desire for these good things must go before their realization. For a glimpse of the self-reliance, the eagerness, the bravery of the South, one has only to visit a Southern college and see the earnest, thrilling desire for the opportunities which the people believe to be concealed in education. The influences that hinder and obstruct cannot wholly restrain or dull it, and it grows by what it feeds on. It is something of a spirit, I fancy, that lives for us in the glad, grateful words of young Ulrich Von Hutten, spoken to the bright face of Freedom in the morning of the modern world: "Students are blooming; minds are awakening. It is a joy to be alive." It is the spirit which will cause history to place our epic period not in the heroic days of '61 and '65, when our soldiers performed prodigious feats of arms, but in the grinding days of '65 to '95, when they and their sons rose above the difficulties that followed the wake of war. The going of a Southern boy to college is no conventional, quite ordinary, stage in the life of a youth. It is always an event, and sometimes a tragedy. It most frequently means, that, far away in the home, the father and mother work harder and rest less, and scrimp here and save there, eating skim milk and oatmeal and taking counsel in the still hours of the night how they may give their child the privileges they did not know, and the entrance into the clearer, fresher, sweeter life denied to them. I have seen a feeble woman's face set with stern resolve and glow with ineffable love at the very thought of her boy putting on his armor at the price of her own life. The dignity, and power, and political value of childhood and youth as the fittest and ultimate concern of the legislator, the preacher, the political economist, the true statesman, has entered our life as one hundred years ago it entered the life of the French, aroused by the mad earnestness of Rousseau and aghast at the havoc of revolution, or as it entered into the thought of the English a generation later to the music of Wordsworth's immortal ode.

Higher education in the South does not exist for its own glory, for the fame of its teachers, for the pride of sect or for any subjective or selfish reason. Its aims must be pure public aims, and its service public service.

In portentous era and with inadequate means, it stands for the beneficent force that must transmute the tumultuous, untrained life about it into self-government perfected by education,—its material the youth of a new life and a new century, and its strong fortress the self-conscious state, no longer a synonym of rude force, but an

expression of Christian sympathy, and unity, and conscience, seeking to realize and show forth the dignity of democracy, the beauty of popular concord and justice, and the majesty of republican citizenship.

THE NECESSITY FOR FIVE CO-ORDINATE GROUPS OF STUDIES IN THE SCHOOLS.

BY W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION.

In the report of the committee of fifteen it was partly assumed that the studies of the school fall naturally into five coördinate groups, thus permitting a choice within each group as to the arrangement of its several topics, some finding a place early in the curriculum and others later. These five coördinate groups were, first, mathematics, and physics; second, biology, as including chiefly the plant and the animal; third, literature and art, including chiefly the study of literary works of art; fourth, grammar and the technical and scientific study of language, leading to such branches as logic and psychology; fifth, history and the study of sociological, political, and social institutions. Each one of these groups, it was assumed, should be represented in the curriculum at all times by some topic suited to the age and previous training of the pupil. This would be demanded by the two kinds of correlation defined in that report, as (1) "Symmetrical Whole of Studies in the World of Human Learning," and (2) "The Psychological Symmetry, or the Whole Mind." The first stage of school education is education for culture, and education for the purpose of gaining command of the conventionalities of intelligence. These conventionalities are such arts as reading and writing and the use of figures, technicalities of maps, dictionaries, the art of drawing and all of those semi-mechanical facilities which enable the child to get access to the intellectual conquests of the race. Later on in the school course, when the pupil passes out of his elementary studies, which partake more of the nature of art than of science, he arrives in the secondary school and the college to the study of science and the technique necessary for its preservation and communication. All these things belong to the first stage of school instruction whose aim is culture. Post-graduate work and the work of professional schools has not the aim of culture so much as the aim of fitting the person for a special vocation. In the post-graduate work of universities the demand is for original investigation in special fields. In the professional school the student masters the elements of a particular practice, learning its theory and its art.

It is in the first stage, the schools for culture, that these five coördinate branches should be represented in a symmetrical manner. It is not to be thought that a professional school or a course of university study should be symmetrical. But specializing should follow a course of study for culture in which the symmetrical whole of human learning and the symmetrical whole of the soul should be considered. From the primary school, therefore, on through the academic course of the college, there should be symmetry and five coördinate groups of studies represented at each part of the course; at least, in each year, although perhaps not throughout each part of the year.

I have said that the committee of fifteen partly assumed all this in regard to the five coördinate groups. I meant that the committee of fifteen had not only assumed it but to some extent argued the question, for in the detailed consideration of literature, arithmetic, geography, grammar and history, much pains was taken to show the scope and significance of these studies. Their differences, both objective and subjective, were pointed out. It was shown that their study calls into activity different methods of observation and different trains of thought—different categories of the mind, so to speak. It was shown objectively that these branches cover different portions of the map of human learning, lying in some places contiguous to one another, and sometimes widely separated. Read in the light of this explanation, it will be seen that the committee of fifteen intended their report to convince the careful reader that no one of these groups could be taken as a substitute for any other, and that no one of these groups could be spared from a symmetrical whole without distorting the pupil's view of the world. If this assumption of the committee had been fully understood, and if the purpose of the report had been manifest upon the first reading, no one would have found the report lacking in a full treatment of the question of the concentration of studies, and no one would have been disappointed. For it would have needed no additional argument to arrive at the conclusion, that, if there are five coördinate groups, neither one of which can be a substitute for the other, and each one of which is essential to the child's symmetrical view of his world, a concentration which subordinated one or more of these groups to another would do violence to the child's culture.

It became painfully evident, however, in the course of the discussion at Cleveland and subsequently, that the assumption of the committee, as well as the main line of exposition in their report, had been entirely missed by many of the ablest advocates of concentration in studies.

For these reasons I have gladly availed myself of the invitation of your president to present, on this occasion, in a new form, the arguments made in that report, and some statement of the reasons for what is assumed without argument in that report.

I. Commencing with the outlook of the child upon the world of nature, it has been found that arithmetic or mathematical study furnishes the first scientific key to the existence of bodies and their various motions. Mathematics in its pure form, as arithmetic, algebra, geometry, and the application of the analytical method, as well as mathematics in its applied form to matter and force, or statics and dynamics, furnishes us the peculiar study that gives to us, whether as children or as men, the command of nature in this aspect. It is all quantitative. Mathematics furnishes the instrument, the tool of thought, which gives us power in this realm. But useful—nay, essential—as this mathematical or quantitative study is for this first aspect of nature, it is limited to it, and should not be applied to the next phase of nature, which is that of organic life. For we must not study in the growth of the plant simply the mechanical action of forces, but we must subordinate everything quantitative and mathematical to the principle of life or movement according to internal purpose or design. But the principle of life or biology is no substitute, on the other hand, for the mathematical or quantitative study. The forces, heat, light, electricity, magnetism, galvanism, gravitation, inorganic matter,—all these things are best studied from the mathematical point of view. The superstitious savage, however, imposes upon the inorganic world the principle of biology. He sees the personal efforts of spirits in winds and storm, in fire and flowing streams. He substitutes for mathematics the principle of life, and looks in the movement of inanimate things for an indwelling soul. This is the animistic standpoint of human culture,—the substitution of the biologic method of looking at the world for the quantitative or mathematical view.

The bare mention of these differences will suffice for the purpose of proving the necessity of separating these two groups of studies, and for giving each its independent place in the curriculum.

II. The second group includes whatever is organic in nature, especially studies relating to the plant and the animal, the growth of material for food and clothing, and in a large measure the means of transportation and culture. This study of the organic phase of nature forms a great portion of the branch of study known as geography in the elementary school. Geography takes up, also, some of the topics that belong to the mathematical or quantitative view of nature, but it takes them up into a new combination with a view to show how they are related to organic life,—the needs of the plant,

animal, and man. There is, it is true, a concentration in this respect—that the mathematical or quantitative appears in geography as subordinated to the organic life; for the quantitative, namely, inorganic matter and the forces of the solar system, appears as presuppositions of life. Life uses this as material out of which to organize its structures. The plant builds itself a structure of vegetable cells, transmuting what is inorganic into vegetable tissue. So, too, the animal builds over organic and inorganic substances, drawing from the air and water and from inorganic salts and acids, and by use of heat, light, and electricity, converting vegetable tissue into animal tissue. The revelation of the life principle in plant and animal is not a mathematical one. It is not a mechanism moved by pressure from without or by attraction from within. It is not a mere displacement, or an aggregation, or anything of that sort. In so far as it is organic, there is a formative principle which originates motion and modifies the inorganic materials and the mere dynamic forces of nature, giving them special form and direction so as to build vegetable or animal structures.

Kant defined organism as something within which every part is both means and end to all the other parts; all the other parts function to build up or develop each part, and each part in its turn is a means for the complete growth of every other part.

These two phases of nature, the inorganic and the organic, exhaust the entire field. Hence, a quantitative study (conducted in pure and applied mathematics) and biology (or the study of life in its manifestations) cover nature.

It has been asked whether drawing does not belong to a separate group in the course of study, and whether manual training is not a study coördinate with mathematics. There are a number of branches of study, like drawing, manual training, and physical culture, and such matters, which ought to be found in every well-regulated school, but they will easily find a place within the five groups as far as their intellectual coefficients are concerned. Drawing, for instance, may belong to art or æsthetics on one side; but practically it is partly physical training, with a view to skill in the hand and eye, and partly mathematical, with a view to the production of geometric form. As a physical training its *rationale* is to be found in physiology, and hence it belongs in this respect to the second phase of the study of nature. As relating to the production of form, it belongs to geometry and trigonometry and arithmetic, or the first phase of nature—the inorganic. As relating to art, or the æsthetic, it belongs to the third group of studies, within which literature is the main discipline. But beside literature, there are architecture, sculpture, painting, and music to be included in the æsthetic or art

group of studies. Manual training, on the other hand, relates to the transformation of material such as wood, or stone, or other minerals, into structures for human use; namely, for architecture or for machines. It is clear enough that the *rationale* of all this is to be found in mathematics; hence, manual training does not furnish a new principle different from that found in the first or the second study relating to nature.

III. The first study relating to human nature as contrasted with mere organic and inorganic nature is literature. Literature, as the fifth highest of the fine arts, reveals human nature in its intrinsic form. It may be said in general that a literary work of art, a poem, whether lyric, dramatic or epic, or a prose work of art, such as a novel or a drama, reveals human nature in its height and depth. It shows the growth of a feeling or sentiment first into a conviction and then into a deed; feelings, thoughts, and deeds are thus connected together by a literary work of art in such a way as to explain a complete genesis of human action. Moreover, in a literary work of art, there is a revelation of man as a member of social institutions. The nucleus of the literary work of art is usually a collision of the individual against some one of the social institutions of which he is a member; namely, a collision with the state, with civil society, or with the church. This collision furnishes an occasion for either a comic or a tragic solution. The nature of the individual and of his evolution of feeling into thoughts and deeds is shown vividly upon the background of institutions and social life. The work of art, as a piece of music, painting, sculpture, or architecture, belongs to the same group as literature, and it is obvious that the method in which the work of art should be studied is not the method adopted as applicable to inorganic nature or to organic nature. The physiology of a plant or an animal and the habits and modes of growth and peculiarities of action on the part of plants and animals are best comprehended by a different method of study from that which should be employed in studying the work of art. The work of art has a new principle that transcends life. It is the principle of responsible individuality and the principle of free subordination on the part of the individual to a social whole. It is, in fact, the exercise of original responsibility to opposition to a social whole, a repudiation of the proper degree of subordination, that makes the content the work of art. Further discussion is not necessary to show how absurd would be a purely mathematical treatment, or a biological treatment, of a work of art. Mathematics and biology must enter into a consideration of works of art only in a very subordinate degree. It would be just as absurd to attempt to apply the method in which a work of art should be studied to the study of an organic form or to the study of inorganic matter and forces.

IV. Our next coördinate branch includes grammar and language, and studies allied to it, such as logic and psychology. In the elementary school we have simply grammar. Grammar treats of the structure of language. There is a mechanical side to it in orthography and a technical side to it in each of its phases. But one cannot call grammar in any peculiar sense a formal study any more than he can apply the same epithet to natural science of any kind. Natural science deals with the laws of material bodies and forces. Laws are forms of acting or of being, and yet by far the most important content of natural science is stated in the laws which are discovered. So in the studies that relate to man, the forms of human speech are very important. All grammatical studies require a two-fold attitude of the mind, one towards the sign and one towards the signification; the shape of a letter, or the form of a word, or the peculiarity of a vocal utterance—these must be attended to; but they must be at once subordinated to the significance of the hidden thought which has become revealed by the sign or utterance. The complexity of grammatical study is seen at once from this point of view. It is a double act of the will, focusing the attention upon two different phases at once; namely, upon the natural phase and the spiritual phase, and the fusion of the two in one. Looking at this attitude of the mind,—this method of grammatical study,—we see at once how different it all is from the attitude of the mind in the study of a work of art. In grammar we should not look to an evolution of a feeling into a thought or a deed; that would be out of place. But we must give attention to the literal and prosaic word written or spoken, and consider it as an expression of a thought. We must note the structure of the intellect as revealed in this form. The word is a part of speech having some one of the many functions which the word can fulfill in expressing a thought. Deeper down than grammatical structure is the logical structure, and this is a more fundamental revelation of the action of pure mind. Logic is, in fact, a part of psychology. Opening from one door toward another, we pass on our way from orthography, etymology, and syntax to logic and to psychology. All the way we use the same method. We use the sign or manifestation as a means of discovering the thought and the scientific classification of the thought.

Much has been said in the report of the committee of fifteen on the abuse of grammar in the study of literary works of art. The method of grammar leads to wonderful insight into the nature of reason itself. It is this insight which it gives us into our methods of thinking and of uttering our thoughts that furnishes the justification for grammar as one of the leading studies in the curriculum. Its use in teaching correct speaking and writing is always secondary

to this higher use, which is to make conscious in man the structure of his thinking and expression. Important as it is, however, when it is substituted for the method of studying art, it becomes an abuse. It is a poor way to study Shakespeare, Milton, Chaucer, and the Bible to parse them grammatically or analyze them, or to devote the time to the philological peculiarities, the history of the development of language, or such matters. The proper method of studying the work of art is not a substitute for a grammatical study; it does not open the windows of the mind towards the logical, philological, or psychological structure of the human thought and action.

V. There is a fifth coördinate group of studies, namely, that of history. History looks to the formation of the state as the chief of human institutions. The development of states; the collisions of individuals with the state; the collisions of the states with one another—these form the topics of history. The method in historic study is different from that in grammatical study, and also from that in the study of literature and other works of art. Still more different is the method of history from those employed in the two groups of studies relating to nature, namely, the mathematical and the biological methods. The history of literature and science has many examples of misapplications of method. For instance, Buckle, in his "History of Civilization," has endeavored to apply the biological method, and, to some extent, that of physics, apparently thinking that the methods of natural science, which are so good in their application to organic and inorganic nature, are likewise good for application within the realm of human nature. The reader of Buckle will remember, for instance, that the superstitious character of the Spanish people is explained by him as due to the frequency of earthquakes in the Peninsula. In selecting a physical cause for explaining a spiritual effect, Mr. Buckle passed over the most obvious explanation, which is this: The people of Spain were for many centuries on the marches or boundaries of Christian civilization and over against a Moslem civilization. Wherever there is a borderland between two conflicting civilizations, either political or religious, there is a sharpening of the minds of the people so far as to produce the effect of opposition and bigotry. A continual effort to hold one's religious belief uncontaminated by the influence of a neighboring people leads to narrowness and to a superstitious adherence to forms. Narrowness and bigotry in religion are the foes of science and the friends to all manner of superstitions.

Mr. Buckle's work has interested people very much because it is an attempt to bring the methods of natural science into the study of human history. But it cannot be regarded as anything more than an example of an attempt to substitute for the true method in history a method good only in another province.

In biology the whole animal is not fully revealed in each of his members, although, as stated in Kant's definition, each part is alike the means and the end for all the others. The higher animals and plants show the greatest difference between parts and whole. But in history it is the opposite. The lower types exhibit the greatest difference between the social whole and the individual citizen. The progress in history is toward freedom of the individual and local self-government. In the highest organisms of the state, therefore, there is a greater similarity between the individual and the national whole to which he belongs. The individual takes a more active part in governing himself. The state becomes more and more an instrument of self-government in his hands. In the lowest states the gigantic personality of the social whole is all in all, and the individual personality is null, except in the person of the supreme ruler and in the few associated with him.

The method of history keeps its gaze fixed upon the development of the social whole and the progress which it makes in realizing within its citizens the freedom of the whole. This method, it is evident enough, is different from the literary; different from the grammatical; different, also, from the biological and the mathematical methods. In history we see how the little selves, or individuals, unite to form the big self, or the nation. The analogies to this found in biology, namely, the combination of individual cells into the entire vegetable or animal organism, are all illusive so far as furnishing a clue to the process of human history.

The question might arise where religion would be found in these coördinate branches. Religion would, I think, make a sixth coördinate branch if it were introduced into the school, for religion persistently looks at every thing and event, every feeling, thought, and deed in its direct relation to the Divine Reason. This is evidently a method very deeply separated from the methods in any one of the five coördinate branches of studies that have been mentioned in this paper. It is so different, in fact, that it furnishes a ground for removing the study of religion from the school in which the other branches are studied. The method of religion is essentially the method of authority. That of the study of science is essentially that of critical alertness and personal verification. The scientific method of mind is the most hostile of all to the religious. The scientific method saps all authority as such. The mathematical is to be included under the scientific method. So, too, is the grammatical, but not so the literary and historic methods. Literature professedly deals in fiction; in ideal presentations; in artistic wholes which are not found in nature. History, on the other hand, deals with authorities for the events which

it narrates. Its dealing with historic authorities resembles in some respects that followed in the study of the Holy Scriptures; but, in other respects—namely, in the treatment of the evidences—it resembles the scientific study of data derived from the observation of nature. But religion demands from first to last a complete surrender of the mind to the authority of revelation. On the one hand, it is claimed by those who believe in separating the school and the church, that religious instruction should be surrounded by the solemnities of the church, and that it should not be approached in the flippant attitude of one coming from the lesson in mathematics or natural science, or even literature, grammar, or history. On the other hand, those who claim for the school a sixth coördinate branch of study, namely, religion, think that this argument for the separation of methods so widely asunder as those of religion and science has been entirely overrated. But they, too, would carefully guard against the encroachment of the religious mode of study into mathematics, botany, history, and grammar. They would admit that the coördination is complete, and that the separation of methods is necessary in school.

Casting a hasty glance in conclusion over the course of this discussion, we can see what is the relation of this study of educational values to the questions of child study and other topics in psychology, as well as the Herbartian principle of interest. First and foremost, the teacher of the school has before him this question of the branches of learning to be selected. These must be discovered by looking at the grown man in civilization rather than at the child. The child has not yet developed his possibilities. The child first shows what he is, truly and internally, when he becomes a grown man. The child is the acorn. The acorn reveals what it is in the oak only after a thousand years. So man has revealed what he is, not in the cradle, but in the great world of human history, and literature, and science. He has written out his nature upon the black-board of the universe. In order to know what there is in the human will we look into Plutarch's "Parallel Lives." To see what he has done in philosophy and science, we read Plato, Aristotle, Leibnitz, and Hegel. For science, we look to the Newtons and Darwins. We do not begin, therefore, with child study in our school education. But next after finding the great branches of human learning, we consider the child and how to bring him from his possibility to his reality. Then it becomes essential to study the child and its manner of evolution. We must discover which of its interests are already on the true road towards human greatness. We must likewise discover which ones conflict with the highest aims, and especially what interests there are, which, although seemingly in conflict

with the highest ends of man, are yet really tributary to human greatness, leading up to it by winding routes. All these are matters of child study; but they all presuppose the first knowledge, namely, the knowledge of the doings of mature humanity. There can be no step made in rational child study without keeping in view constantly these questions of the five coördinate groups of study.

DISCUSSION.

HERMAN T. LUKENS, Clark University, Worcester, Mass.—Dr. Harris is undoubtedly one of those who “know, and know that they know,” and he usually means more than he says.

Lincoln used to begin his speeches in court by frankly acknowledging the sound arguments made by the opposing counsel, and saying. “Now, I reckon that’s true, too, your honor;” until, after yielding point after point in this way, he seemed to have no case at all. Yet Lincoln almost always won those cases!

In the plan Dr. Harris has just presented, the points that I shall not only not refute, but, on the contrary, wish to emphasize,—because “they are true, your honor,”—are as follows:

I. Grouping of studies is the best solution to the pressing question of an overcrowded curriculum. Grouping brings out relative importance and secures proper perspective. The course of study can be explained by differentiating the studies in each group, or it can be contracted by limiting their number, and in either case the curriculum remains organic, complete, and symmetrical. The principles advocated seem, therefore, to apply equally well to the country school and the city school, the primary and the high school.

II. Dr. Harris is right also in seeking for the basis of the received course of study in a classification of the external culture-material. Ever since Rome, 2,100 years ago, first exchanged her own national, indigenous curriculum and domestic education for the foreign, exotic culture of Greece, the world has been struggling with its inheritance of objective culture-material. Dr. Harris is describing actual conditions when he says, “the pupil has a teacher to direct his studies and instruct him in the proper methods of getting out of books the wisdom recorded in them.” The Chinese are one of the foremost nations in recognizing this. Their very name for child or pupil means “heir of all the ages,” and the schoolmaster aims to give this wisdom in a systematic manner.

III. The convincing way in which the classification of subjects relating to man is presented has something very fetching about it, and it is certainly suggestive of a good objective correlation of these subjects.

IV. The scheme lacks completeness. For, beside the five groups, there are extras, like industrial drawing, manual training, music, physical culture, etc., which are not provided for in the classification, and which are to be taught as “information studies or as miscellaneous exercises.” But this inconsistency redeems the plan, and, as Emerson tells us, inconsistency is a characteristic not to be ashamed of.

1. But this coördination is merely a classification of external knowledge, and this is my first objection. I believe Dr. Harris is here laying the emphasis on the wrong side. The expression so often used, that “these five groups are five win-

dows of the soul," seems to me misleading. They are five external fields of knowledge, and have nothing whatever to do with the question of what mental powers are exercised in their study. It is a blunt, rough statement of fact, and a criticism of the present rather than the raising of an ideal, when we are told "the school causes its pupils to put on the forms of thought given them by the teacher and by the books they use." This condition is most surely reached by mechanical teaching, narrow views on the part of the teacher, and strict following of the text-book, and is something that all leaders in education should strive to their utmost to counteract.

2. The plan assumes without the least compunction an exact correspondence between "the symmetrical whole of studies in the world of human learning" and "the range of studies demanded by psychological symmetry." First, the adult field of objective knowledge is classified; secondly, it is assumed that the needs of the child mind correspond to these groups of studies; and thirdly, that the mind grows evenly or harmoniously in all essential directions at once. These assumptions are totally false, and really make the whole heart of the matter. We know that the mind, like the body, has its growth periods, and that mental growth is not symmetrical. The emotional nature does not develop evenly with the intellectual capacity; the memory and the will have different nascent periods; the best time for studying language is not the best time for studying nature.

3. This plan claims to have surveyed the whole field of actual and possible knowledge and to have "shut it in." We are told that "the completeness of the plan is demonstrated for all time." As new fields of human knowledge and action are opened up in the future, we shall find that they are all provided for in this plan, foreordained and prearranged to fit into their several places. Now, I cannot help feeling somewhat like the claustrophobiacs, who are afraid of inclosed spaces. It makes me feel as though some one should say the apparent sky and horizon are the bounds of the universe. I believe it has an enlarging—yes, in the best sense, a liberalizing—influence on human beings to look off the earth upward between the stars into infinite space, and feel that there is no boundary, no limit, no danger of being cramped for room, no possibility of getting an idea too large to correspond with reality.

4. Contrast for a moment the cross-section of the curriculum here advocated with the longitudinal section as sketched in the famous eighth book of Aristotle's "Politics." The genetic curriculum there outlined is concerned mainly with the question of correlation of studies in sequence. First comes care of the body in infancy, with no continued studies nor compulsory work. Later, in boyhood, lasting till puberty at fourteen or fifteen years of age, the care and training of the passions and the formation of proper bodily habits receive greatest attention. At puberty three years are to be spent in severe discipline of the intellect, after which a course of hard exercise and strict regimen, practical affairs of state, public and private business, are relied upon to train the will and make men of action.

To my mind such a course of study raises far more vital questions than any considerations in classification of external culture-material. The Greeks had a great advantage over all that have come after them, in that their culture was national and spontaneous. They sought to make education a means of aiding every one to reach the highest possible phase of development by the unfoldment of his own inborn powers. The aim of education was to make men "love and hate aright." When the Romans borrowed Greek culture they started that disastrous experiment, which every nation since has followed, of making the acquirement of external culture-material the end as well as the means of education.

I do not see how anyone who appreciates the difference between external whitewash and internal culture and is thoroughly in sympathy with the present

movement for child study in education can think that an objective classification of knowledge is the main question concerning the curriculum. The stages of growth in the child, its nascent periods for language, music, drawing, etc., the collecting manias, the spontaneous interests of the child, the best period for hard discipline of the intellect,—whether, as Aristotle says, just at the beginning of puberty, or as others think, later after the first onset is past and the social emotions and expanding aspirations of adolescence have begun to well up in the soul,—these are pressing questions that must yet be settled by patient, honest study of the realities with which education has to deal.

Not even in manual training and physical culture are the data thus far collected sufficient for drawing up with any confidence a rational course in these subjects based on the physiological facts of child development. Still less is it yet possible to make such a course in the mental and moral studies. Yet for this very reason these questions are fullest of hope, suggestion, and inspiration for all of us, and that is why I for one feel more interest in them than I do in staking off the bounds of human knowledge.

PRESIDENT WALTER L. HERVEY, Teachers' College, New York City.—The question before us, as stated by the last speaker, is, Which one of Dr. Harris' five groups shall we blot from the curriculum of the elementary schools—the literature group, the history group, or the natural science group. I understand that President Schurman accepts the literature group, and that he would reject the other two, namely, the physical science group, including mathematics, and the grammar group, leading, as it does, up to logic and philosophy. But President Schurman himself is a sufficient answer to any proposition to abolish from the elementary school the beginnings of philosophy, and the university of which he is the head is the best argument against blotting out of the elementary school the foundations on which schools of engineering must rest. For nothing is clearer than that the curriculum of the university is limited absolutely by the curriculum of the elementary school. If you suppress a subject in the latter you thereby impair, and even destroy, entire groups of departments in the former. Education is a unit. If five coördinate groups can be traced in the university they must also be found in the elementary school.

WHAT CORRELATIONS OF STUDIES SEEM ADVISABLE AND POSSIBLE IN THE PRESENT STATE OF ADVANCEMENT IN TEACHING?

C. B. GILBERT, SUPERINTENDENT OF SCHOOLS, ST. PAUL, MINN.

In a recent number of a leading educational periodical, the distinguished editor sadly announces the death of Apperception and pronounces a eulogy over Correlation moribund. For Correlation is dying; and yet, he has not been wholly unkind to us. Let us at least speak well of him beside his death-bed.

I can hardly believe that our friend the editor meant quite what he said. He must have been thinking, not of correlation as a spiritual force in education, but of correlation as a catchword; a name to conjure with; something for foolish radicals like your humble servant to talk about in gatherings such as this. If apperception were

not dead, I should say that possibly he had not apperceived correlation. Or did he have that higher truth in mind, so beautifully expressed by One who lived long ago, "Except a grain of wheat fall into the ground and die, it abideth alone; but if it die, it bringeth forth much fruit?" For such is, I trust, the future of correlation.

No great truth is productive until it loses its identity, ceases to be abstractly by itself, and becomes absorbed in life. Even Christianity is fruitless so long as it is merely a beautiful doctrine to contemplate, a wonderful philosophy to study, or a refined system of forms and ceremonies. It is only when it dies in these respects that it lives as a constituent and ruling force in life.

Before stating what correlations of studies seem advisable and possible at present, I must make clear what I deem important principles, essential to any wise correlation, the recognition of which will avoid many of the blunders which have placed correlation in a false light; for correlation has been in as great danger from its friends as from its enemies. Premature attempts have been made to crystallize it into systems, to bind it down to mechanical forms, often by those who failed to grasp its spirit aright, resulting in strange and kaleidoscopic courses of study, which have given excuse to its enemies for the claim that correlation means basing school curricula upon artificial and fanciful relations and disregarding essential unities within lines of study. But these things are not correlation any more than bigotry is religion or formalism Christianity.

I would define correlation in courses of study as a recognition of the natural relations existing among the various departments of human activity, and such an arrangement of these departments for presentation to the child, that all his knowledge shall stand clearly in his mind in its true relations to the whole and to each of the parts.

If the child is to go forth from school fitted for a life made up of relations, it is necessary that the knowledge he receives and the activities in which he engages in the course of his preparation shall all have reference to these relations; hence, courses of study which determine both the knowledge and the activities must be so arranged that isolated knowledge and reasonless activities shall be impossible.

For, what are the various branches of study? What determines whether a study falls within one branch or another? Merely the point of view. The same object may be studied as belonging to several of the different branches. Dr. Charles McMurry clearly pointed this out in the December number of the "Public School Journal," using the oak tree as an example, which may be studied with equal propriety from the standpoint of the botanist, of the artist, of the lumberman, of the social scientist, of the meteorologist, of the poet; and each view obtained is but partial. His illustration might have

been multiplied infinitely. Man himself may be studied, as to his body, from the standpoint of the physiologist, of the physician, of the employer of labor, of the anthropologist, of the artist, of the cannibal. As to his mind, the study of man classes him with any one of a hundred sciences, from insanity to theology; and there are still unreckoned sociology and all the other studies which treat of his relations with other men, and in none of these is he a whole man. No one represents round truth. For the most part, the classifications are arbitrary, were made when the world of knowledge was vastly smaller than it is to-day, and do not even fairly represent existing conditions; and the child who studies them as separate and distinct branches of knowledge, which will fit him for separate and distinct activities in life, does not get a truthful impression.

Dr. Harris tells us that there are five coördinate branches of human learning, and that it is important that all of these receive attention in a scheme of education. No doubt. But it is more important that the essential unity of them all be also recognized, for these five departments are not to be conceived of as parallel lines, extending into infinity and nowhere touching. They are rather the radii of a sphere united at the center in a vital union from which comes all the worth of each, for each is enriched with the richness of all the others.

From the above it will be seen that true correlation is neither artificial nor mechanical; it cannot be fully shown even in the best courses of study. Primarily it must exist as subjective in the mind of the teacher. If he grasp the essential unities of things, it may, to a degree, be made objective and apparent in the course of study, and still more so in the teacher's interpretation of it; but it is more important that the teacher be in himself a correlation of knowledge than that a course of study exhibit it. If teaching is a vital relation between teacher and pupil, and if the end of teaching is the development of the pupil,—as Professor Tomkins puts it, "The union between the pupil's real and ideal self,"—then the essential thing, so far as knowledge is concerned, is, that it shall be correlated in, and with, the pupil's mind.

If these things are true, as I believe them to be, the first thing which we must do is to train the teachers. They must be filled with a sense of the importance of correlation as a principle. It must become subjective in them. This means a better education for the teachers, that they may have a larger view of the truth. But it is not necessary to wait until we have a more highly educated body of teachers before we begin. The very act of grasping and administering a broad and wisely correlated course of study is in itself a liberal education.

In trying to introduce some of the ideas here expressed, I have met with this difficulty: The teachers themselves, trained in the old way, at first failed to comprehend the relations of knowledge,—the spiritual, vital relations,—a grasp of which is necessary to success in life. But while I have sometimes been discouraged because of this inability of teachers to understand the real purpose of correlation, I have been still more encouraged by the eagerness and enthusiasm with which they have tried to seize the spiritual intent, and by the self-sacrificing devotion with which they have endeavored to fit themselves for the higher work, until I have been ashamed of my lack of faith.

The old courses of study were deadening to teachers as well as to pupils; the new are inspiring truth. Teachers feel that they themselves are growing while leading their pupils to the shrine of truth. The improvement of the teachers, both in spirit and in power, has been one of the most marked effects of improvement in the courses of study. No one can devote his energies first to comprehending and then to imparting the broad ideas implied in a truly correlated course of study without growing in breadth and power from the effort.

Upon the superintendent falls the task of preparing this course of study, which shall furnish material for growth and stimulus to effort to both teacher and pupil; and here we come to the meat of the problem, for even the most thorough students of correlation do not all agree as to what it means and as to how it is to be made effective in schools. We are as yet seeking for truth, and need to be very honest with ourselves and to keep all our windows open. But a few things seem to me reasonably clear.

The first thing which one preparing a course of study must take into account is the distinction between form and content. This seems to me vital. A correlated course of study must include both coördination and subordination; a coördination of the great fundamental branches of human thought,—the five of Dr. Harris, if you will,—and the subordination of those branches which are in nature subordinate. The former constitute the content, the latter the form, of a course of study; or, to put it differently, I use the term content as including those branches of study which possess an intrinsic and fundamental value, and form as including the means by which the essentials are realized. In a general way, the former consists in a consideration of man and the spiritual world and of the world of nature, and the latter of the various arts by which man comes to a possession of nature and of himself. Of course, these distinctions are not arbitrary nor exact. A distinction between form and content does not imply that they are to be treated as separate and unrelated entities; that would not be correlation, but disintegration.

It rather means that they are to be so related in the teacher's mind, and are to be so presented to the child, that they will always stand in his mind as form and content. He learns to read, not that he may learn to read, but that he may be introduced to the world of literature. He learns to write not that he may learn to write, but that he may be able to communicate the best that is in him for the benefit of others. I do not mean by this that there should not be direct and thorough drill upon the arts themselves, but that this drill should be given after and not before the child has come to realize his need of a medium of expression. The higher end ennobles the means and makes it worth acquiring.

I have been criticised for drawing this distinction, and especially for saying that the arts are secondary, and that knowledge furnishes the content. My position was not understood. There are three general divisions of the work of education. The first is creating in the child a high purpose; the second is acquainting him with conditions, needs, and possibilities; and the third is furnishing him with the means for the accomplishment of his purpose. But these three are parts of one whole. The second—acquainting the child with conditions, needs, and possibilities; in other words, knowledge—stands as a middle term, creating ideals on the one hand, and suggesting activity, stimulating effort to acquire the means, on the other. Hence, it forms the natural content of his education.

The great reason for placing emphasis upon the distinction between form and content is the necessity for the comprehension of this distinction by the adult, if he is to have a true grasp of values in life. One principal obstacle to the progress of civilization is the failure of men to comprehend the difference between means and ends, between form and content. The average man devotes his energies to the acquiring of that which is, in itself, only a means to a higher end. The eager struggle for money, for power, for social position, which renders so ignoble the life work of most of us, is due to the fact that we look upon these things as ends in themselves, and not as means to higher ends. But what can we expect of men whose early efforts have all been devoted to the acquirement of means as if they were ends?

If the child is taught to read as if the ability to read were the end of his effort; to write, as if fine writing were the best thing that he could do, what reason have we for expecting that the man will look upon money, and power, and social position, as means for helping his brother man? "Life is more than meat, and the body than raiment." Art for art's sake is thoroughly detestable. As well might we say, food for food's sake, or the body for the body's sake. No great work of art, whether in painting, music, sculpture, or liter-

ature, was ever great merely because of the artistic skill displayed; rather has its greatness consisted in the noble thought whose expression the artistic skill made possible. This does not mean that skill is not necessary, but rather that it must be kept subordinate to the theme. This alone makes it worth while. Tennyson's musical verses did not make "In Memoriam," but they made it possible. For the sake of writing "In Memoriam," it was worth while that the poet should master all the arts of poesy. Nobility of purpose, exaltation of theme, whether in adults or in children, furnish the only true stimulants for laboriously acquiring the arts necessary for adequate expression. This, applied to education, does not draw a hard and fast line between form studies and content studies, but relates them properly, so that the child always has before him the worthy aim as an inducement to the acquiring of the adequate means. While this subordinates reading, writing, spelling, and language drill, it does not degrade them. It rather exalts them, since thus alone do they find their true place and are ennobled by a noble purpose.

Let me here say that I do not believe, nor do I mean to imply, that these subordinate branches are to be taught wholly incidentally. It is true that power to read, write, spell, draw, and in the mechanical sense, to use language, is acquired mainly by practice in the use of these arts. It is an unconscious product, just as walking is; still, there is a technique for each of them, knowledge of which adds greatly to the power to use them effectively, and this technique must be taught specifically and thoroughly, but at the proper time and in the proper way; that is, as to time, when the child feels the need of it, that he may better attain one of the higher ends of life. As to the way, the technique of this art must be so taught as to satisfy this need, so that the child may feel that he is gaining a new power to aid him in the attainment of a desirable end. The amount of attention to be given to this study of technique varies with the age of the child, as indicated by his school grade.

In the primary grades comparatively little attention need to be given to the technique of expression. I am compelled to disagree with the opinion by some inferred from the report of the committee of fifteen, that the first three years of school life should be devoted almost exclusively to the acquisition of this technique, with only incidental and casual attention to the content of the course of study. I would reverse the order. It is true, that, in these three years, the child should acquire a fair possession of this technique; but at his age, when he is little able to grasp philosophical principles and to undertake effort with a view to remote results, it is all the more nec-

essary to appeal to his interest. The young child will best acquire the necessary arts incidentally. The ends for which he works must be evident. Place before him a content to him valuable and interesting and immediately obtainable, and he seeks it through the medium of the necessary arts. The adult, the young man in college, may study mathematics for the sake of training his mind; the child, not so. The end that he seeks is to-day, and he must have the means at once.

I would say, then, that, in the first years, the course of study should have for the child the richest content which he is capable of grasping. Thus he will best gain possession of the various necessary arts, and, what is still more important, his mind will receive a better training and will be filled with richer thoughts, and he will emerge from these years of school with a broader horizon and a more eager desire to continue his education. Hence, in these earlier years, especial attention should be given to the study of nature and of literature,—the lines of study that are at any age most broadening. As the child advances from grade to grade, more attention may be given to technique, as he becomes able to see the relations between form and content; that is, to understand the reasons why certain forms of expression are better than others.

I have dwelt thus upon the relations of form and content because I deem it the first and most important correlating principle. It remains to consider briefly coördination, or the relations of the coördinate branches of human learning in the course of study.

As I have said, these must all be taken into account, but not as unrelated. Here even the best of our old courses of study broke down. They aimed at the education of the faculties, and ignored the unity of the human soul. They recognized variety, but not variety in unity.

In the first place, a broad course of study should be so arranged that naturally related parts of the different coördinated branches may be taught at the same time. I say, naturally related; not artificially or mechanically, but spiritually, if you will. Our old courses of study are full of absurd instances of variety without unity. It is no uncommon thing for a class to be studying at the same time the geography of Africa, the history of England, the plant life of Minnesota, while having for their reading lesson the story of Peter the Great; the subjects having no relation, either artificial or natural.

On the other hand, there are new courses of study which are as absurd—correlation run mad, as I have heard it described. I remember hearing of a day's lesson in a certain over-correlated city. The subject was the crow. The children studied the crow, read about

him, drew him, wrote about him, counted him, added, subtracted, multiplied, and divided him, bought and sold him. Here was no fundamental or vital relation. The coördinating principle was trivial and unsound, and doubtless several good lessons in history, reading, and arithmetic were spoiled for the sake of the crow.

I have said that naturally related parts of the various coördinated branches should be taught at the same time, but I do not mean that the relations are necessarily time relations. These would frequently be artificial, and not even suggest the spiritual unity; and this, it seems to me, is one of the criticisms to be made upon a course of study concentrated about history, for the relation here inevitably is mostly a time relation, which may be best and may not.

I will attempt to make my thought concrete by an illustration taken from the schools of a certain city. A seventh grade class regularly studies the history of the United States, the geography of North America, the writings of certain American authors, and local geology. These studies may be so timed as to suggest inevitably fundamental and vital relations. To begin with, the class are taken out for a field lesson upon the banks of the Mississippi. Here they see the fundamental rock strata; observe the great valley worn out by the waters; get specimens of rock containing the earliest fossils; see the broad plains stretching out into the boundless prairies, whose soil was deposited by the glaciers. They learn how the great Mississippi Valley, with its broad adjacent plains, was formed; that is, they get a concrete knowledge of the physical geography of this part of the world. This leads both to the history and political geography. They learn not only the effect of early explorations on this river and on the great lakes, but they see why those explorations were made. They not only find out how these great plains were produced, but see in them the reasons for the migrations of so many people and for the vast civilization growing up in the Great West. The struggles of the early settlers are emphasized by the poem "Evangeline," and the travels of Irving and others, so that a complete picture of the growth of Western civilization, with an understanding of its cause, is left upon the minds of the children. A taste has been created for investigation and a love for literature, while, also, all this rich content has served as a basis for numberless lessons in reading, writing, and language.

I offer this illustration hesitatingly, for fear that some may say that it is open to the criticism of emphasizing artificial relations. If any so conceives it, I am misunderstood. The relations that I would emphasize are mostly those of cause and effect, though not altogether. The aim is to produce unity of idea in the minds of the children. Each child should have a single vivid picture, including

objects from all those coördinate branches, which is worth infinitely more than any number of isolated facts, even though they included all of history and all of geography.

Now, as to the correlating principle for the coördinate branches, it must be evident that I do not believe in the concentration of the course of study about any one branch. No one branch of human learning is clearly enough defined, or essential enough in itself, to be the center of a course of study for the child. No one is so much more intimately related to the child than all the others that it can determine for them their arrangement and the selection of topics from them. The only centralizing relation in the education of the child, in reference to his destiny, and hence, the first principle of coördination as to its breadth, is that indicated in the committee of fifteen's report, namely, the relation of the child to his material and spiritual environment.

Psychology, not history, not science, determines also the longitudinal correlation of the course of study. By psychology I do not mean the old psychology, which is merely deductive logic applied to certain assumed mental phenomena, but the actual study of the child. Depending upon this, the correlated course of study of the future will determine what shall be given the child at each stage of his development.

There are many things concerning correlation about which there is still uncertainty, but as to what we can do in the immediate future, I feel reasonably sure upon these points:

1. That the only correlation to be considered consists in the recognition of the natural and spiritual relations already existing in the world.
2. That these relations exist, if at all, in the human mind, and hence, must become subjective in the teacher; then, in so far as possible, objective in the course of study; then, again, subjective in the child.
3. That the relations to be considered in the course of study must include both subordination and coördination—a subordination of form to content and a coördination of the essential departments of thought.
4. That the only center for a correlated course of study is the child—the child whose rights have so long been ignored, whose nature has been so blindly misunderstood, whose soul has been so dwarfed and maimed in the vain effort to accommodate him to a ready-made course of study, and bind him down with the chains of logic, to make him fit into the form of a cast-iron frame, miscalled psychology. Yes, fellow teachers, the child must be our first study; and when all the branches of human learning with which he can be

brought into touch, all the activities to which he may be stimulated, are properly correlated with the demands of his nature, we will find that they are correlated with one another, and the miracle will have been wrought.

DISCUSSION.

SUPT. W. P. BURRIS, Bluffton, Ind.—In the statement of the question under consideration there is the implication that an ideal scheme of correlation is to be modified in its application to suit the limitations of teachers. We think this would be unwise, and our discussion will be largely on this point.

In the first place, such a compromising attitude could only give us a caricature of a plan of instruction whose chief claim to recognition lies in the fact that it proposes to unify and economize effort in popular education in order to better realize in the individual the highest aim of life. It is not a "fad" or "novelty" to make school life temporarily attractive. It is not a "pun." It is not an accretion of a system already in practice. It calls for a new elaboration. In the light of new principles it would re-assay the world's educational ore in the crucible of reason and select only the purest gold. It offers a unity whose unifying purpose is to be seen running through the course of study like the scarlet cord through every inch of cable belonging to the English navy. It calls for reorganization, not revision. It seeks to readjust the accents, placing the emphasis where it belongs.

While granting that teachers, generally speaking, are not what they should be, we believe that the adoption of such a scheme as that now proposed would be the most effective means of raising the profession of teaching that could be employed. We know from observation that it is in itself a revelation to the teacher. Teachers dead in the trespasses and sins of formalism have been raised to walk in newness of life. We cannot raise the school without raising the teacher. We cannot raise the teacher without raising the scheme of instruction—without offering a higher view of the world order. The teacher cannot make study reveal that of which he is himself unconscious. In order to teach others to come into intelligent relations with their natural and spiritual environment and understand the drama of the yet unfinished creation, it is necessary that the teacher have a well-organized knowledge of the sciences and a keen appreciation of the world's culture. To teach the arts of expression he must be an artist. If we make a demand for such teachers the supply will be forthcoming.

The weakness of the American teacher is his culture. He has been taught that it does not make so much difference what is taught as how. Like the surgeon of whom you have heard, it matters not whether the life be saved provided the operation be brilliant. By all means give us the teacher of liberal culture plus his study of method; but if he cannot have both, give us the teacher of liberal culture.

The system now proposed, however, will give us both. It calls for the culture first, as it should do, and the demand for efficiency in instruction will give us method. We will then have teachers who, as some one has said, can both fly and walk; fly with the seers and walk with children.

We do not think, therefore, that the greatest gain is to come to popular education by a surrender of any principle which should unify the scheme of instruction. There must be unity. The same cannot be if conflicting systems are mixed for the sake of compromises. Let systems stand or fall according as they are right or wrong in principle. Otherwise, we are without anchorage—without

basis for the selection of all that pertains to the process of education. Is the nature of the being to be educated not yet understood? Is there no dramatic tendency yet observed in creation which is a clew to human destiny? Are we still without a central aim in popular education? Is there need of a new critique of educational values? Until these questions are answered it is too early to consider the question before us.

We believe, however, that there is substantial agreement, both as to the central purpose of education and the materials for universal culture; as to what should constitute everybody's education—what common ideas and sentiments should form the connective tissue of society. The point of divergence is the basis on which the course of study should be organized; whether it should constitute a logical, philosophical, or psychological unity. All are good, but which is best is the question.

In reference to the first, we can read the handwriting on the wall. The second, while regarding the true relations of thought to form, adopts too general a principle for popular education. It is the true one for the entire field of education, but if followed consistently in elementary education it would compel us to neglect the humanities for the nature studies. The last contains all the good in the other two, and much besides. It renders the iniquities of formalism impossible. It insures teachers of a broad culture, as none other can carry such a scheme into successful practice. It gives the child growing insight into the stream of human culture, the nature through which it flows, and the reciprocal relations of the two. It makes for moral character through instruction by keeping the child as the center of effort.

The principles of this scheme have been considered by almost every educational meeting,—national, state, county, and township,—for a term of years. They have escaped the critical examination of no chair of pedagogy or educational journal. Others, still, have suspended judgment as to their value until the chain of sequences they have set in motion should be observed in the practice of the schoolroom. We are of this class. The full tale is not yet told, but results fully warrant continuance in the path pointed out. Expression of opinion, progressive and conservative, has had free play. Both have disdained to pass final judgment, but each, recognizing in the other a necessary unit of force, constituting the general power which works out educational changes, has perceived that both may properly give full utterance to innermost conviction, and in venturing to express mine, I think that the principles of the paper are substantially right. And now that the first rash rush of the Herbartian invasion is past, and some sober concessions have been made for the sins of some of its youthful exponents and some misapprehensions cleared away, this new movement is seen to be but the necessary readaptation which orderly progress in education demands.

CONCENTRATION OF STUDIES AS A MEANS OF DEVELOPING CHARACTER.

BY CHARLES DE GARMO, PRESIDENT OF SWARTHMORE COLLEGE, PENNSYLVANIA.

In this topic there are involved the most perplexing problems of pedagogy and psychology. A wilderness of words have been uttered on the subject of concentration since the Cleveland meeting, and as in the days of the Sophists each man seems to regard himself as the measure of truth. The problem of the development of character did not begin last year, but had its origin at least as far back as the time of Protagoras, the noblest of the Sophists. The possibility of teaching virtue was stoutly maintained by Socrates, but who will assert that he pronounced the final word? Kant emphasized the antithesis between the intelligible and the empirical character, declaring that the seat of morality is in self-determination alone. Modern psychology has tried to learn how character grows by investigating the influence of transient and permanent interests upon the will. I have tried to reconcile experience and reason by showing that the rational or free will is by nature subject to evolution, like life, feeling, and knowledge. Is the doctrine of inherent interest, and with it empirical psychology in study, merely an *ignis fatuus*? Are the insight and disposition cultivated by correlating important knowledge in the pupil's mind to be regarded as but fragile reeds for our support? Here is indeed a mare's nest of logical difficulties, but I shall take the Anglo-Saxon's privilege of ignoring them for a few plain considerations that have a manifest bearing in the world of practical affairs.

It might fairly be expected that this paper would devote itself to a psychological analysis, showing just how the organization of knowledge may be expected to influence the growth of character. That work has, however, been attempted by others. I must, therefore, beg the indulgence of those who anticipated such a treatment, since I intend to confine myself to such considerations as appeal directly to experience and current educational thought. Assuming, therefore, what some may regard as the main proposition to be proved, viz., that a rational correlation of knowledge will favorably affect character, three things seem to me to be involved—what we shall correlate, how we shall correlate, and to what end we shall correlate; or, in other words, the kind of character the schools, and especially the city schools, should attempt to develop.

It must be assumed at the outset, that a civilization so far as it works intelligibly, develop a character efficiently in a civilized state of society. Persian, Mediæval, Puritan, Ecclesiastical notions of character valid as ends, since the world has long since transcended conceptions of civilization. But if we look about us on every side, in politics, education, industry, business, living, the rule is organization. Every enterprise is characterized by the idea of regulated coöperation are the universal rule. Men work together for organized groups, both large and small. If, now, this type of education—that of isolated or of correlated study—is most in accord with the methods of modern apprehend there can be but one answer. Granted that organization is an important factor in the development of character, it can be seen that any arrangement of study whereby insight and knowledge and capacities is promoted works for the kind of character most desirable under the conditions. It is equally evident, on the other hand, that a type of studies, which promotes insight into modern social conditions favorable to its ideals, works for rather than against the formation of the institutional type of character.

I cannot in this paper enter upon an extended discussion of the problem of concentration, which I conceive to be one of the most important of subject-matter as will tend to make instruction interesting, and valuable to the pupil. There are many practical suggestions regarding the kind of character to be developed and presumably of service in the development of character, which I desire to enlarge upon. It appertains to the function of the school to be called apperceptive centers in each prominent branch of learning. Every concrete branch of learning taught in the school should be of what may be called root ideas, upon which all other knowledge depends. Sometimes, as in mathematics and the sciences, the root ideas are connected by causal or logical relations. Sometimes, as in history, geography, and literature, no such connection exists. In any case, however, the selection of topics for presentation to the child will depend largely on these considerations. The proposition I wish to make is that every topic taught shall be built up into an apperceptive center in the child's mind. An illustration may be taken from the notion "canal" is frequently met with. Upon the first occurrence in the study, let some concrete idea be mastered. Some of the prominent elements of the idea are as follows: The ditch, the water level and

which may be represented on the board or modeled from pasteboard by the children. Then the canal boats, their structure and propulsion. Why should mules be so much used in this age of steam and electricity? Finally, the produce carried, its starting point and destination. When a concrete case has been mastered, a basis of understanding and interest has been laid for all the varieties of canal in the world. Without departing much from the leading purpose of the lesson, much related information concerning other forms of transportation may be taught, together with related information about the configuration of the land, the sources of supply for the canal, freight, and so following. In like manner the other agencies of transportation, such as railroads, street cars, elevated roads, ships, and steamboats may be similarly presented. So of a large number of geographical ideas. Arithmetic, too, has its root ideas, as McClellan and Dewey have so well shown in their "Psychology of Number." So, likewise, have grammar, reading, history, botany, zoology. Any teacher can select the important topics in each of these subjects, can build each up into a center of understanding and interest, and can relate these topics to each other within and without the main line of sequence. This form of correlation is assisted by the juxtaposition made natural by common principles of development, as in the theory of culture epochs for culture subjects, but it is not dependent upon such arrangement. This plan renders concentration (or correlation, as I prefer to call it), a principle to be observed in the recitation, rather than a program to be followed. The former is available for every teacher; the latter, perhaps, only for the expert.

The conscious building up of apperceptive centers in each subject about which shall be associated striking features of related knowledge, has several important advantages. It encourages the teacher to make his lessons rich with concrete matter and stimulating through their constant challenge to thought. Even the torpid mind awakes to the realization that learning is allied to life, study becomes attractive, insight and interest deepen, and gradually there is developed a permanent healthy attitude of mind toward life and its work, its duties and opportunities. Sane views of conduct are generated; healthy modes of feeling become habits of the mind. The child becomes, in short, a citizen; not a mere individual inhabitant.

More, however, than we need to construct a theory of concentration do we need to reconstruct our theory of character. This assertion is based on the fact that our prevailing ideals of character were formed when society in this country was in its pioneer state. At the beginning of the present century only some three per cent of our population were in cities, and even then these so-called cities were

little more than overgrown towns, or groups of villages. This being the case, it is natural that our conceptions of character should be based upon primitive conditions of society, which in our great municipalities no longer exist.

A city represents a system of reciprocal activities, duties, concessions, and benefits; the country in a primitive state is a place for independent, and, in the economic sense, non-social living. The essential idea of pioneer and rural life is isolation, independence, non-responsibility for others; that of the city is reciprocity, coöperation, mutual responsibility. Social coöperation in the city, with respect to health, comfort, and prosperity, is a necessity; in the country, the chief end is companionship. At the present time nearly a third of our population is concentrated in cities. New York and its environment contains more people than were in the thirteen colonies at the close of the Revolution. Yet even in these vast centers of population the ideals of a primitive community still prevail; for the dominant ideal of character in this country is that of an essentially non-social individualism. The European ferment during the seventeenth and eighteenth centuries drove the strong, independent characters out of that continent into the wilderness of the New World. Here the essentially primitive conditions that prevailed for 250 years developed all the initial non-social instincts among the strongest members of a strong race. Glorious as have been the past results of this personal independence in the subduing of a continent and in the defense of the nation against foreign foes or internal dissensions, we find no orator to praise, no poet to sing the glories of this spirit when brought under the conditions of our modern urban life. The story of our city government is one of inefficiency, rapacity, and fraud.

These primitive ideals of character are found on every hand, even in our oldest cities, and they are almost universal in rural districts. One may see the results of this conception under city conditions best, perhaps, when we consider the influx to cities from villages and rural communities. The newcomer to the city would preserve the privileges of the district from which he came—a yard, a stable, a rubbish heap, perhaps, a well. But if, on the other hand, he demands privileges, he is equally ready to grant them. He is content to allow one man to drink milk and another whisky, nor is he disturbed if one chooses to keep a cow and the other a saloon. Should the water supply be foul, he seeks to protect himself individually by bringing water from a spring or by buying a filter. His neighbors may look out for themselves. Why should he trouble himself to prevent their drinking the microbes of typhoid fever or to protect them from other filth diseases? Primitive morality does

what it can in charity from pure pity for the individual beggar, but it acknowledges no responsibility for changing the conditions that produce beggary. It is the lack of civic morality that allows political and corporate rapacity to fasten themselves upon the city. When it is proposed to have the municipality undertake some important work of improvement costing a million dollars, the non-social citizen is horrified at the taxes involved, and promptly votes against the proposition. But he constantly allows a corporation having the capital to make the investment and then to bleed the city for half a century. When boodlers gain control of the city machinery for purposes of extravagance and fraud, though he may grieve at the wreck of public business he never thinks of making it his own.

The same non-social spirit that permits offensive sights, sounds, and smells, saloons, and slum, unsanitary conditions, poor illumination and transportation, and slovenly or corrupt public service in general, also allows hordes of children to roam the streets untouched by the refining influences of the school. An effective system of compulsory education that would enable us to assimilate rapidly and easily the ever-growing tide of foreign life cast upon our shores is impossible, because it clashes with the non-social instincts of personal independence. The inevitable result of primitive instincts when placed in the city environment is public discomfort, the presence of infectious diseases, political corruption and corporate exaction, together with ignorance and hopeless poverty and degradation for a large part of the community. It is to the city schools that we must look chiefly for the development of what may be called civic patriotism. Primitive, non-social instincts must be supplemented by social or civic instincts. We now put much emphasis upon the development of national patriotism. But is the chief lack here? Is not the integrity of the nation safe? Do not the unintelligent as well as the intelligent respond to the call of country? Did not the poor white of the South and the ignorant foreigner of the North fight shoulder to shoulder with the best men of their respective armies during our late war? Where was there ever more undaunted courage and fidelity on either side than in the Russian assaults upon the Turks at Plevna? We need now to put the emphasis upon civic rather than upon national patriotism. The latter in its non-social form is an inextinguishable instinct even of primitive peoples, but the former is the last and best product of civilization. A bare suggestion of war in this country can set the land ablaze with military ardor, but who can arouse a corresponding enthusiasm in the civic warfare against corruption, inefficiency, ignorance, and compulsory poverty?

An illustration of what is meant by the social as contrasted with the non-social instincts is seen in the transformation wrought in the city of Birmingham by Mr. Chamberlain and his colleagues.

When Mr. Chamberlain became mayor in 1874, he found a city having no parks, no public libraries or museums, no free schools, no public baths or washhouses. Its streets were wretchedly paved and abounding in filth. The street lighting was poor in quality but high in price; the water supply was inadequate and of poor quality; the sewers were wretched, and the death rate thirty in the thousand. Worst of all, a large part of the city was given up to slums of the worst sort, where disease, wretchedness, immorality, and crime went on almost unchecked. Through the influence of the social spirit invoked by this man, this condition of things has been wholly changed. The city has now ten public parks; it has free schools, free public libraries and museums of art, and public baths. The city furnishes the illumination for the streets, which is now plentiful and inexpensive. It erected adequate water works, paved the streets, put in an efficient system of sewerage, and reduced the death rate by a third. It condemned and bought up the slum district, demolished the old buildings, and rented their sites to responsible persons for the erection of buildings of such character as to render slums forever impossible. At the end of seventy-five years all the property so developed falls to the ownership of the city itself. All these things were done without raising the tax rates, and in such a manner that the greatest expenditures will, in the course of time, pay for themselves. Moreover, it is said, that, at the end of the seventy-five years, Birmingham will be the richest city of its size in the world.

So long as our present non-social ideals of character prevail, first in the school and later in the community, so long will our municipal reforms prove to be both ineffective and transient. They are brought about through infinite labor of the few, only at the next election to relapse into the former state. The form of scientific temperance teaching has now become almost universal, yet it is largely ineffective because back of it, and largely annulling all its efforts, stands the non-social spirit of our people. We shall not get to the bottom of this or any other reform until the schools consciously go to work to supplement our excessive individualism by the insights and instincts of the social disposition.

While on the one hand it cannot be expected that formal teaching or isolated knowledge will do anything to implant these new ideals, made imperative by new conditions of life, liberty, and prosperity, so on the other hand little is to be expected from an artificial concentration of knowledge that does nothing to awaken mankind to the social attitude of mind, in which alone progress in that which enriches life is possible.

The three essential things, then, are vital knowledge, rational correlation, and new conceptions of character. As in the cities there is the greatest need for these new ideals, so in the cities are to be found the best opportunities for realizing them.

DISCUSSION.

DR. B. A. HINSDALE.—The lines of battle are drawn here this morning much as they have been drawn on previous fields of discussion. It is contended on the one hand that the proper point of view from which to survey the child's education is that of the available culture-material. It is insisted on the other hand that such point is the nature of the child. Participants in the discussion emphasize respectively environment and psychology. "The course of study is of prime importance," some say; "Psychological analysis of the child mind is what we want," others reply. I cannot think the issue is so sharp or so important as the contestants appear to think.

Education is the growth, expansion, or development of the mind through its own activity. Hence the mind is a fundamental fact to be considered. But the mind acts, and so grows, only when brought into relation with objects capable of stimulating it to activity, and so to growth. Hence objects of knowledge—what we may call culture-material or education-stuff—is also a fundamental fact in education. The process that we call education may therefore be examined on either side, viz., the nature to be educated and the material or stuff to be used in educating it. There is an adaptation of the external world to the nature and needs of the mind; there is an equal adaptation of the human development, or of civilization, to the same nature and needs. To deny this last proposition is to deny that the civilizations of the foremost nations are psychological; it is rather to affirm that they are not genuine manifestations of man's nature, but are parasitic growths. Hence the two points of view are correlatives, and to omit either one is to commit a mistake. Nearly, if not quite, the whole field can be seen from either point of observation. If Dr. Harris and Dr. De Garmo were to sit down at a table to draw up a course of study, they would not materially disagree, save, perhaps, in the reasons that they might assign for their respective recommendations. For instance, Dr. Harris would urge the study of geography because it is forced upon the child by his environment; Dr. De Garmo would urge its study because it is adapted to the development of the mind. Neither one, I feel sure, would wish to deny the validity of the other's reason. Accordingly, I appear on the well-fought field in an ironical spirit, and plead not for a compromise but for a broader view.

ISOLATION AND UNIFICATION AS BASES OF COURSES OF STUDY.

BY EMERSON E. WHITE, LL.D., COLUMBUS, OHIO.

An important condition in the development of any science is the use of clearly defined terms to denote its facts and principles. This is strikingly illustrated in the development of the natural and physical sciences. The terminology of chemistry, physics, and biology

has made these sciences possible. It is difficult to see how they could be presented in language without the use of definite technical terms, not only to denote phenomena, but principles and laws. Most of the terms in the present science of electricity lie outside of the vocabulary of the general scholar, and are known only to specialists in the science. The same is true, to a greater or less degree, of all the modern trades, professions, and arts. Each has a large glossary of technical terms peculiar to itself, each term having a definite meaning.

It is one of the recognized infelicities of the science of psychology that so many of its terms are in general literature, where they are used with varying and often diverse significations. Indeed, one of the first conditions of the intelligent reading of a work on psychology is the determining of the definite meaning of the terms used by the author—not always an easy task. No psychologist who uses important terms in different senses, or with the meaning obscure, can be a successful author. This is specially true in that branch of psychology known as moral science or ethics. Much of the inconclusive and fruitless discussion which besets the student of ethics is due to the fact that the disputants use terms in different senses. A common source of disagreement is the use of words by one party with a larger or smaller content than the other, and this is true even when these contents contain a considerable common element.

We thus approach one of the serious obstacles in the development of a science of pedagogy. Its terminology presents a most striking contrast to that of the physical sciences. Many of its terms are borrowed from psychology and ethics, not a few from philosophy, and these from authors who use the same terms in different senses. Indeed, the science of pedagogy has a very small vocabulary of technical terms which are used by all writers with the same meaning. This fact is the source of wide confusion in thought and much fruitless discussion. It must be evident to every careful observer that the movement in recent pedagogical inquiry is the reverse of the movement in other modern sciences. Instead of careful differentiation and the use of special terms to denote things that differ, there is in pedagogy much ambitious generalization and the use of terms that express indefinite and vague entities—terms that have been appropriately called “blanket words,” since they so readily cover a group of diverse ideas. I frankly confess that I read articles and listen to addresses on pedagogy that baffle my understanding, not, as I flatter myself, because they are too deep for me, but because of their vagueness and obscurity. Much of the present conflict of opinion in pedagogy is largely due to the fact that those who differ do not understand each other, and it is doubtful if each one always understands himself.

We have an instructive example of this difficulty in the discussion of the past year over the place and value of "correlation," "coördination," and "concentration" in school instruction. The discussion has been a Babel confusion of ideas, if not of tongues, and well-meant attempts to settle the pedagogical meaning of these terms have only added to the confusion. After all that has been said, several writers for the educational journals are using the incongruous terms coördination and concentration as synonymous. One of the surprises of the profession was the expressed expectation that a recent report on the "correlation of studies" would be devoted to a discussion of the theory of concentration!

The desire to be understood in the present paper has led me to avoid, as far as possible, these badly mixed-up terms, and to use, instead, terms that are more definite and fundamental. For this purpose, I have selected the terms "isolation" and "unification" as denoting opposite processes and results.

The term isolation, as used herein, denotes the separation of a branch of study from other branches for the purposes of instruction—the teaching of it in a separate exercise. I do not use the term in the sense of exclusion. The isolation of a branch of knowledge in instruction does not involve the exclusion of all the facts and skill that may have their origin in other branches. For example, the isolation of arithmetic as a school exercise does not mean that the data for its problems may not be taken from another branch of study. It simply means the making of instruction and drill in number the central and controlling end of the exercise, the unit of activity. The same is true of isolation as applied to the other branches of the course.

The term unification is used in a contrary sense. The unification of two or more branches of study means their union in instruction in such manner as makes them one branch, with a common sequence of facts, and taught with a common end or purpose. The term is not limited to any particular mode of uniting the several subjects. For our present purpose, it makes no difference whether they are united as coördinate elements, or whether one is made the principal or core and the others subordinated to it, as we construct complex sentences.

The term unification is, however, exclusive of isolation. It does not include the teaching of branches in separate exercises, however skillfully these exercises are related to each other. If two branches are taught in separate exercises, each having its appropriate and special development, they are not unified in any true pedagogical sense. For the purposes of instruction, they are isolated. Nor is this fact of isolation changed if the several separate exercises all center in

the pupil, and actually contribute to one teaching result. All rational instruction necessarily centers in the pupil, and in this respect methods do not essentially differ. The essential fact in complete unification is the unity of the subjects or branches in actual instruction—their oneness in the teaching process.

This leads to the natural division of the studies of a school course into coördinate groups or unities. Fortunately, this subject has been too ably and too exhaustively discussed in this presence to require further elucidation. The only question is, whether there are more or less than five coördinate groups of studies. Dr. Harris admits that there is a sixth coördinate group of knowledge, the one that includes religious truth—the fifth in Dr. Thomas Hill's "hierarchy of studies;" and Dr. De Garmo's earnest plea for the recognition of three coördinate groups, the third being called the "economic," necessitates, if conceded, the adding of a seventh coördinate group—a group that includes drawing, construction, book-keeping, etc., and better designated as the *industrial art* group. Whether these two additional coördinate groups be, or be not, recognized as belonging to the school course, does not concern our present purpose. The important fact is, that, while these coördinate groups, whether five or seven, have certain interrelations, they have a different origin, a different law of sequence, and as a consequence, a different development; and it follows that no one of these coördinate groups can be united with another coördinate group by making the one or the other subordinate. *Coördinate entities can not be unified on the principle of subordination.* This is a fact of prime importance in pedagogy. If the existence of coördinate groups of studies be once conceded, the Ziller theory of concentration is left in the air, since this involves *subordination*.

It is also plain, that, in discussing the question of unification, a clear distinction must be made between the unifying of allied subjects in the *same* group and the unifying of subjects that belong in *different* coördinate groups. A failure to observe this distinction is resulting in much confusion. There is necessarily a close relation between subjects in the same natural group, and their union at different points in instruction may, as a consequence, be both feasible and desirable. But the unifying of coördinate branches is a different matter. Take, for example, the several subjects that make up the mathematical group. Whether arithmetic, algebra, and geometry shall be taught tandem, or the elements of algebra and concrete geometry run abreast of arithmetic in the latter part of the arithmetical course, is a pedagogical question that can be best settled by experience. This is simply the proper correlation of allied subjects

within a group. But the harnessing of mathematics to history or to natural science is another procedure. It constitutes a team of pedagogic animals that do not naturally travel the same road or in the same direction!

The unifying of allied subjects within a group and the unification of separate coördinate groups are very different pedagogic problems. The distinction has a parallel in the difference of the powers of the signs + and — and the signs $\times$ and $\div$ in algebra, the former denoting relations *between* terms and the latter the relations of numbers *within* a term. It is important to keep this distinction in mind, for it is easy to pick out facts, and even groups of facts, in allied subjects which are so closely related that they may be taught together with obvious advantage, and then cite these instances as evidence that unification is a universal principle of teaching.

It should also be kept in mind that the unifying of closely related facts or groups of facts selected from separate branches is not the unification of the branches as wholes. A teacher may, for example, use the transparency of glass to illustrate the meaning of a lucid style in writing, but this would hardly be the unification of physics and rhetoric. The pedagogic purpose is not to teach the transparency of glass. The same is true when the skill acquired in one branch is used as an aid in teaching another. Thus, skill in drawing may be utilized in teaching geography, but this is not, in any true sense, the unification of drawing and geography, and, whenever it may be desirable to call such a procedure unification, care should be taken not to broaden the meaning to a unifying of the branches of study.

We are now prepared to ask whether either isolation or unification can be made the basis of a course of study. It may be helpful in this inquiry to note, that each of these principles may have three quite distinct degrees of application, as shown on page 90.

It is here seen that isolation is considered *complete* when it applies to each branch of instruction, whether the end be knowledge or skill, and to each branch from the beginning to the end of the course. It seems unnecessary to add, that this degree of isolation is not found in the American school. Spelling and reading were united more or less closely long before I was a pupil, and the same has long been true of the elements in other allied branches. Complete isolation is neither practicable nor desirable.

The second degree of isolation more nearly represents the practice of the modern school. The coördinate groups of studies are isolated in instruction, except in the lowest grades, and the well-defined branches in each group are taught, as a rule, in separate exercises. There is, however, an increasing blending of the school

ISOLATION.			UNIFICATION.		
THREE DEGREES			THREE DEGREES.		
First Degree. COMPLETE. All branches taught separately throughout the course.	Second Degree. GENERAL ISOLATION. with incidental blendings; especially in <i>Primary Instruction</i> , including the language arts.	Third Degree. COORDINATE BRANCHES. for development and drill, with rational blendings of <i>Allied Subjects</i> when relations are close and helpful; especially in ELEMENTARY INSTRUCTION.	Third Degree. ALLIED SUBJECTS. at points of close relation, especially in <i>Elementary Instruction</i> with isolation of all <i>Coordinate Branches</i> for special development and drill.	Second Degree. GROUPS. All branches united in two or three <i>Coordinate Groups</i> , each with a <i>Central Core.</i> Incidental isolation of branches for special development and drill.	First Degree. COMPLETE. All branches united in one <i>Organic Whole.</i> with a <i>Central Core.</i>

arts, especially in primary grades, the arts of reading, spelling, writing, and language having many close relations and possibly inter-unions. Advantage is also taken of the natural relations between allied subjects, and there is much incidental blending of these subjects in actual instruction. But in many schools unification is not intelligently sought as an end. What is done in this direction is incidental, and only the more simple associations are attempted. Isolation is the dominant principle, unification being incidental and exceptional.

The third degree of isolation will be best explained in connection with the same degree of unification.

Complete unification is the blending of all subjects and branches of study into one whole and the teaching of the same in successive sections. When this union is effected by making one group or branch of study in the course the center or core and subordinating all other subjects to it, the process is properly called the concentration of studies. In such a unification of subjects the principle of sequence and development of the central or core study necessarily dominates the entire group, and the proper development of each subordinate study is sacrificed. Nor is this result avoided by making the child the center, whatever this may mean, since this ignores the principle of development in *all branches*. Complete unification of school studies is neither practicable nor desirable.

In the second degree of unification all branches and subjects are united in two or three coördinate groups, each with a central core. It recognizes coördination as a true and fundamental principle in a course of school studies; and it allows each coördinate group to have its own principle of development, contenting itself with those natural and simple associations which are easily established between subjects in the same group. It also permits the isolation of the coördinate branches in actual instruction, and their systematic treatment. All this means much, for, if the principle of isolation applies to coördinate groups *because they are coördinate*, it necessarily applies to *all* the coördinate groups in a course, *whatever be the number of such groups*.

If the attempt to subordinate mathematics to literature or history leads to fantastic results, as is conceded, the same will be true of an attempt to subordinate either physical or biological science to the so-called culture studies. Hence the argument for two or for three coördinate groups, each with its own sequence and development, concedes the whole ground; and we thus again reach the fact, making one subordinate to the other. *Coördination excludes subordination*.

A glance at the outline given above will suffice to show that the third degree of unification and the third degree of isolation are practically the same. They differ chiefly in emphasis, one putting the emphasis on unification and the other on isolation. Both agree in the unification of allied subjects and closely related facts, and both require the isolation of coördinate branches for development and drill. Neither proposes to subject one branch of study to the principle of development that belongs to another, but each branch and subject is to receive such separate treatment as its nature demands. Both agree that unification is most feasible in elementary instruction where the association of facts is simple and easy.

It is obvious from this survey that the application of the principle of unification falls largely *within the details of actual instruction*. If closely related facts in different branches are to be united in instruction, it must be done by the living teacher; and hence the problem of unification belongs more to the art of instruction than to the curriculum of studies. The curriculum should, however, not only include the five coördinate groups of studies, but the sequence in each group should correspond with the psychical development and progress of the pupil. Since human knowledge is the result of human knowing, every branch of study has natural phases that correspond to the psychical phases through which pupils pass as they ascend in the course. A true course of study not only properly correlates the five coördinate groups of studies, but it cuts off a section of each in every round of its ascent. It thus adjusts, so far as this can be done in a scheme of studies, the exercises and disciplines of the school to the psychical condition and needs of the mind. Studies are thus put in right inter-relation by being put in right relations to the pupil. The child is, in this psychological sense, the center of the course of study.

These facts suggest the mischief that may lurk in an exaggerated view of the importance of unifying all the studies of a child. The attempt, for example, to associate every fact of nature with literature may give now and then a beautiful, even striking, lesson; but nine-tenths of the important facts of nature cannot be hitched to a poem. The attempt to establish such associations inevitably results in fantastic, and even ridiculous, combinations. Nor can I see much promise in the effort to unify all branches of instruction by *universal relations*. There may be a "causal flexus" that binds all knowledge into an organic unity, but children are not philosophic spiders that gather knowledge by excursions over a web of philosophic causation.

It is seen from the foregoing survey of the subject that the principle of unification cannot be made the basis of a rational course of

instruction—much less of a curriculum of school studies. Its most fruitful applications are in teaching allied subjects *within* the several coördinate groups, and here chiefly in teaching the elements. It also has an important place in teaching the more closely related facts in different coördinate groups, known facts in one group being used in teaching related facts in another group. Here is the recognized field for the practical application of the principle of unification, and such application promises valuable results.

But the obvious principle that underlies not only courses of study but methods of teaching, is the fact that every coördinate branch of study has its own natural sequence and development, requiring its isolation and separate treatment. Instead of the concentration of all branches of study by subordinating all the rest to one central core, there must be increasing differentiation and isolation, with proper recognition, of course, of all important inter-relations. It thus appears that isolation is the dominating principle in a true course of study, unification having its place and function chiefly in the processes of instruction.

One more observation seems a fitting conclusion to this study. It does not follow that facts taught separately remain isolated in the pupil's thought. The mind is endowed with the power of assimilation and unification, and this power is more fundamental in education than is dreamed of by some philosophers. Were the assimilation of knowledge or the unification of mental power dependent upon the philosophic mixing of the materials of instruction in the mind's hopper, I fear that most of us now present would be idiots. We have all been doing a little assimilating and unifying on our own account, and have actually been able to see some of the simpler relations between facts not learned in the same school exercise, or in the same day, or even in the same year. It may be true that few of us have seen many of the "universal relations," which, according to the somewhat uncertain testimony of philosophy, binds all knowledge into one "organic unity," but we hope to get more of these insights, at least in the next world. Nor are we much comforted with the suggestion that a child can be made to *feel* the oneness of all knowledge, even though he may not intellectually apprehend it. The feeling of a truth not present in the mind seems to border on mystery! It is a wise child that sees the immediate relation between the more common facts of observation and experience.

DISCUSSION.

DR. CHARLES A. McMURRY, Normal, Ill.—Dr. White in his conclusion gives isolation the dominant place in the course of study. I should be inclined to give isolation and unification an equal importance in the processes of selecting, arranging, and teaching the subjects of the school course.

The tendency heretofore has been very strong in the direction of isolating school studies. They have been artificially separated. There is a sequence in any subject like grammar or arithmetic that must be observed so as to bring the facts and principles into a scientific order. There is a positive advantage in setting a thing up distinctly so as to see it apart from others, but it is equally important to relate it afterwards to other things and to understand the relations. Analysis must always be followed by synthesis, isolation by unification; otherwise knowledge is broken into fragments and scattered. No important fact can be understood by itself. It must be seen in its relations to bring out its meaning. Minneapolis, for example, is not understood by stating its location on the upper Mississippi and the fact of its commerce. But call attention to the pineries of the North which send their millions of logs yearly down the Mississippi and its branches to Minneapolis to be changed into lumber and distributed to the grain regions of the West; notice also the wheat fields of the Northwest sending their millions of bushels of wheat to Minneapolis to be milled into flour and distributed to the East and to Europe, and you begin to see in these relations to great producing regions, to rivers and railroads, the causes which have worked so swiftly to produce a great city.

Dr. White has chosen to ridicule the causal idea, and yet it is the root out of which grows much of the best interest and insight into studies,

The isolation alone of studies means the superficial mastery by the memory of the facts, while unification as worked out by a deeper correlation of ideas on the basis of similarity and causal connection is a deeper grasp of meanings.

In the past we have neglected to trace out causal relations and connections which give greater unity and value to the knowledge that the child acquires. It is better to make children thinkers than to make them simply memorizers. We separate and isolate studies. But it is true that a child, after thus setting things up and leaving them in this artificial isolation, goes from the school into the world and doesn't recognize the things he has been studying; nor is he able to make a practical application and use of the knowledge he has acquired. In the books he finds the trees and plants all beautifully arranged and isolated from other things; so also with insects, stones, etc. Out in the woods he finds together the trees and insects, the sunshine and birds, the grasses and stones, all in close and even vital life relationship of dependence and mutual support. Why not make school work and studies correspond to life?

DEAN F. M. McMURRY, School of Pedagogy, Buffalo, N. Y.—I wish to put only one question to Dr. White. In his paper, just read, the conclusion reached is largely dependent upon his assertion that there is a necessary sequence in the arrangement of topics in each study. His thought evidently was, that this sequence was so important or so necessary that each study sacrifices altogether too much by being associated with some one branch as a center. I for my part have never yet been able to discover the suggested necessary sequence in most of the common school studies. I would like to ask Dr. White to show that there is such a sequence in geography, in nature study, and in literature. [Dr. White here replied, saying that any science presupposes a necessary arrangement of its subject-matter,

and consequently there is this necessary sequence in the common school subjects.] In showing that there is a necessary sequence in the studies, Dr. White has assumed that the studies taught in the common schools are taught as sciences. For instance, he seems to regard arithmetic, literature, geography, nature study, etc., each as a science. I take it, that, in this discussion, we have in mind, primarily, the common school curriculum. I doubt very seriously whether any one of the common school subjects should be taught as a science. If I am right in this view, then the argument of Dr. White loses its basis. The necessary sequence remains unproved, and that being the case we are not at all sure, that, by subordinating some studies to others, the former have much to lose.

ORGANIC RELATIONS OF STUDIES IN HUMAN DEVELOPMENT.

BY W. N. HAILMANN, WASHINGTON, D. C.

I. The complexity of man, as the highest product of evolution, and therefore embodying the whole of evolutionary history, renders the task of determining these relations exceedingly difficult. This difficulty is still further increased by the fact that in man the "everlasting will" has become individualized, and is attaining freedom as a final cause in shaping the life of the individual. Nevertheless, in a large way, these very difficulties indicate quite clearly the ultimate criteria that should guide educational work in the selection and use of its materials and measures. The liberation of the individual will is the aim of all educational work. This implies as the ultimate aim of human learning the knowledge of man in his origin, his evolutionary history, his relations to environment, his essential constitution, his destiny.

In heredity man is established; in education he becomes free. In heredity the will preserves its achievements by the mere force of inertia and increases them in the steady gropings of natural selection; education lifts the will out of the shadows of hereditary instinct into the broad day of insight, of free aspiration, of deliberate coördination with recognized law. Through education the selfish centripetal coils of mere self-preservation are taught to merge into generous centrifugal spirals of self-expansion; whatever in man has been narrowly individual becomes broadly universal; static indolence is spurred into dynamic striving; the evanescent pleasures of eager interests are replaced by the deeper and more permanent joys that bless a life of love and freely followed duty.

The inmost essential of the child,—that by which man ceases to be a mere animal; that by which he frees himself from heredity and becomes amenable to education; that through which are opened to

him the portals of humanity, with its infinite possibilities,—the inmost essential of the child is soul. To stimulate this into activity,—or, rather, to afford it every opportunity for activity in efforts to lift itself out of the limitations of lingering instinct into the freedom of a purposeful will,—this should be the constant aim of every educational act or measure. This is the first and foremost law of educational method. The “laws of self-activity”—of “stimulation for self-activity”—are but other formulas for this requirement, that every educational measure should tend to establish the conscious self-mastery of the soul.

Three phases are involved in self-activity—the stimulus which entering consciousness and the memory, results in knowledge; the attitude assumed by the mind towards this mental income, resulting in more or less definite purpose; and the steadfast outward following of such purpose, resulting in achievement. In a narrower sense, the first of these phases is termed the head or intellect; the second, the heart; the third, the will in action, or the hand. The active unity of these three constitutes harmonious life. It is clearly not desirable, more particularly during the earlier educational periods, to separate these three in distinct efforts at independent intellectual, moral, and manual or physical training. To do this would tend to impair the integrity of the mental act which begins in experience, is established in thought, and bears fruit in action or life-conduct. As through the senses the world rushes inward to meet the instinctively eager mind-heart of man, awakening it to consciousness of life and self, so through the hand does this same mind-heart project itself outward as a determining, and ultimately the determining, factor in life.

At no time should the educator forget the essential unity of these three phases in the soul-life of man. Every new knowledge should stimulate new deeds. All better knowing should result directly and unavoidably in better doing. Conversely, every new achievement should rest on increasingly clear intellectual apprehension; all outward life should be based on increasingly distinct insight.

This is by no means vitiated by sociological requirements of division of labor or interest, of specialization of effort, and of massing individual forces. It is perfectly legitimate under this law of harmony, that, under certain conditions of social life the formulation of knowledge, the crystallization of purpose, and the achievement of purpose should be assigned to different individuals, or groups of individuals, provided only that all be in conscious harmony as to the essential oneness of their work. In fact, education should take cognizance of these sociological necessities, and should stimulate in its work such specialization and division of labor and massing of individuals in common enterprise.

Much has been said of the need and value of apperception in intellectual development, a phase in the process of mental assimilation in which the mind on the basis of former gains assigns to new experiences their proper place in its treasure-house of living knowledge, and emphasizing in growing distinctness resemblances and differences arrives at increasingly clearer, more definite, and more abstract conceptions of things and relations. These apperceptual results, however, are very superficial and flimsy affairs unless they become rooted in the heart-life of purpose and find fruitage in living achievement. In order to become permanently valuable possessions they need to be intensified in another deeper phase in the process of mental assimilation, a phase for which I feel tempted to propose the name of introception. In this phase of assimilation, the new experience, after having in apperception assumed its proper place in the light of previous acquisitions, becomes an integral factor in the self-expansive, outward life of the mind-heart of man, by which this mind-heart lifts itself out of mere seeing and doing into universal insight and creative self-assertion, which are both the crown and essence of harmonious life.

Yet these two laws alone—the law of self-activity and the law of harmony—might lead man astray unless there live in every purpose the divine spark of benevolence or love. Indeed, it is possible to develop strong, self-active, individual character, possessing much clear knowledge of things and relations, which it utilizes in the service of an energetic and intensely fruitful and subjectively harmonious life, yet devoid of love, immorally serving self at the expense of higher and wider life, or unmorally gratifying pleasure, keeping out of harm's way, turning life back into channels of mere self-preservation or perverting self-expansion into greedy self-accumulation, never reaching the blessed fields of self-devotion. Out of this gehenna of hopeless egoism only the divine spark of love can save man; a love that teaches him in altruistic fervor to love his neighbor as himself, and that lifts him, subsequently, to a degree of insight which kindles in his soul devotion to the ideals of humanity. Thus by love is man lifted out of the egoistic life attitude, in which, as Fröbel would say, he is essentially the child of nature, through the altruistic attitude, in which he is the child of man, into the humanitarian attitude, in which he is crowned the child of God.

These three—self-activity, harmony, benevolence—constitute the three primary laws of method; or, rather, the three phases of the one law of method which requires that every full educational measure should stimulate into self-active life the entire being in harmony with benevolent purpose.

This law guards us against all manner of one-sidedness, fragmentariness, artificialness, and other sterilities. It guards us alike

against the vanities of erudition and the arrogances of empiricism. It bases every educational advance on the pupil's widening and deepening experience, which it leads steadily to deeper thought, better purpose, and higher achievement. It gives to experience the drift towards thought, and to thought the thirst of knowledge which is but clearer experience. It teaches thought to seek achievement, and urges achievement to press for keener thought. It imparts to the whole being the fervor of creative effort, and sanctifies this at every step with never-failing good-will.

Moreover, this law, which is based upon the essential unity of man in his varied life utterances, adapts itself readily to parallel unities among the various phases of human learning. A glance at a few of these unities will illustrate this.

II. It seems to be universally conceded that the ultimate object of human learning as such is the knowledge of man in his origin, his history, his relations to environment, his essential constitution, his destiny. With reference to this, all else is vestibule or avenue, material or implement. Biology, psychology, history, sociology, philology, and possibly the metaphysical sciences, on the one hand, as well as mathematics, physics, chemistry, geography, and astronomy, on the other hand, owe their value and dignity to the light they throw upon the life of man and humanity, or to the control they give him over his physical environment for the purposes of his enlarging life. It will be noticed in these series, that each lower serves to explain its higher, and finds its justification in this fact. Thus, mathematics has no value in itself, but assumes high dignity as the key that unlocks physics, and through physics, chemistry, and the rest. Similarly would biology fall into contempt as an idle amusement, were it not that it furnishes data for the succeeding sciences, and represents the indispensable first step in ascending to a worthy knowledge of man and humanity.

This relation among the sciences is so pronounced, that, to many, each science appears in the light of an art with reference to the sciences that follow in the scale. This will become transparently clear when in the series we substitute for the names of the sciences the names of the things and relations with which they deal. In such a series we find mathematics, physics, and chemistry dealing successively with considerations of number, form, force, and motion, both molar and molecular, and the remaining sciences busy with life, its environment, kinships, and aspirations. Taking this series at any point, it is manifest that each consideration leans for the light of analysis upon its predecessor, and owes its value to the analytic light it throws upon or transmits to following considerations.

Thus in the analysis of form, number considerations mark every step of the road; and in the related arts of measurement and draw-

ing considerations of form are, indeed, in the lead, but would yield little result without the definiteness and precision which are brought within our reach through knowledge and control of the involved number relations. The laws of matter and motion must remain forever a mystery but for the solvent powers of number and form knowledge when applied to chemical and physical phenomena and in the intricate analyses of dynamics; and here again, in the applications of these laws to the concerns of practical life, considerations of number and form alone can secure safe guidance in the technical manipulations and arts that deal with laws of matter and energy.

Similarly, life—at least, in its physical and physiological aspects which relate to the conditions and tools of life—is explained in the light of established laws of matter and energy; and so well and thoroughly is this accomplished that many thoughtful students fancied they might explain on the same ground even the psychic side of life, denying the possibility of self-active effort, which is the soul of life. On the other hand, intimate knowledge of individual life and its conditioning environment is indispensable in our attempts to understand the kinships of life, both sociological and historical; and these, in their turn, throw floods of light upon the substance and meaning even of man's highest aspirations in art, philosophy, and religion.

III. In applying these relations among the various branches of human learning to problems concerning the development of the child through education, as sketched in the first part of this inquiry, we are struck at the outset with the fact, that, as the child in his development—individual and sociological—gradually passes from simplest to increasingly complex conditions, interests, and activities, so also in the hierarchies of human learning do we proceed from the simplest of sciences, arithmetic, through increasingly complex intermediaries to sociology, the most involved of sciences. We are, therefore, justified to look in this parallelism for hints to guide us in determining the order in which subjects of instruction shall come to the child as special objects of interest, apart from the relations they may sustain to other subjects of the instruction or the share they may have in life or in human learning as a whole.

However, before entering upon more detailed considerations of this and other related practical problems, it is desirable that we should fully appreciate the differences between what are termed the developing and the didactic methods of instruction and the places they hold in the work of the school. For this purpose, it is not necessary to go through an elaborate analysis of the two methods of work. I content myself, therefore, with enumerating the chief points of contrast between them.

Didactic instruction in its methods is primarily and predominantly synthetic and deductive. It begins with general statements, definitions, axioms, principles, established systems. Developing instruction, on the other hand, is primarily and predominantly analytic. It begins with particular things, phenomena, and relations, and reaches by processes of induction the definitions, axioms, principles, and systems on which didactic instruction rests. Didactic methods are dogmatic, dialectic, static; transmitting the recorded knowledge of the race and the conventions of institutional life. Developing methods are heuristic, socratic, dynamic; finding and sifting knowledge, establishing attitude. Didactic instruction fills the memory; its pupil is predominantly receptive and imitative; the stress is on the subject of instruction. Developing instruction stimulates self-activity; its pupil is predominantly self-assertive and creative; the stress is on his environment and experience with reference to the subject in hand and on his control of these in life. It goes almost without saying, therefore, that these two methods of instruction, far from being antagonistic, are supplementary of each other. Didactic instruction begins where developing instruction ends, and in its turn didactic instruction furnishes the true basis for further development, adding to the experience of the individual that of the race, lifting him out of local into universal environment, out of social into sociological life, out of empiricism into science, out of interest into aspiration. On the other hand, developing instruction supplies the pupil with living points of apperception for the vital assimilation of didactic income; gives him the habit of self-actively testing and verifying this income in practical application, as well as the attitude of placing his self-assertive and creative life into vital harmony with the life of the race.

Without the vitalizing influence of mental habits and attitudes which only developing methods can establish, didactic instruction fails of its purpose, transmits only the forms and husks of knowledge, oppresses and arrests life by the sheer weight of these, leaves man stranded upon the shoals of mere erudition. Without the wealth of data and breadth of outlook which can be derived only from didactic instruction, development is liable to go astray, to be starved into self-conceit or wrecked on the reefs and bars of a narrow and wasteful empiricism.

For fullest life, for the fullest realization of the purpose of education, which is the liberation of man's individual will into universal freedom, the deliberate, organic coöperation of both methods is necessary. For this reason, it would be preferable, instead of speaking of two methods, to speak rather of two phases of one and the same rational, progressive, or organic method, whose purpose it is to en-

able succeeding generations to coördinate themselves self-actively with the continuously progressive development of the race.

Even in the nursery the educational instinct of the mother prompts her alternately to stimulate her child's self-active development by more or less suggestive adjustments of environment, and then to guide his conduct, to enrich his interests, or to hasten his vague inductions by example or precept, by descriptive or narrative snatches of story or reminiscence, and by other more or less didactic devices. Still more pronounced is this in the kindergarten, and further on, in the elementary school. All of this implies more or less didactic modes of procedure, entered upon with a view, however, of intensifying development, expanding the child's horizon, deepening his interests, ennobling his purposes, or enhancing his powers of achievement.

Indeed, we should never lose sight of the fact, that all didactic devices—so far as the nursery, the kindergarten, the primary school, and even the grammar school are concerned—are strictly in the service of development, and that they owe their value exclusively to this fact. Moreover, in the case of these educational factors, this development is primarily and predominantly individual and social, although with a growing tendency towards universal and sociological phases. It is firmly rooted in the child's personal experience and environment, yet steadily growing towards the freedom of science and art. It relies largely for spontaneous fervor on the pupil's interests, which, however, as steadily expand into the freedom of aspiration.

Later on, in high school and college, these tendencies begin to assert themselves more and more clearly as the dominant factors in development. The student now should learn more and more consciously and deliberately to base individual and social efficiency upon sociological requirements and universal law, to control experience and environment in the light of the achievements of science and art, and to place his life under the direction of an enlightened, liberated will.

IV. In entering, now, upon a more detailed consideration of the practical problems involving the relation of the various branches of human learning to child development, we may, therefore, at the outset, profitably distinguish between two great periods of instruction in which the developing and didactic methods successively predominate, and which we may designate, respectively, as the elementary and scientific periods of instruction. Waiving the nursery, the first of these embraces the kindergarten, and approximately, the first six years of school life; the second embraces the last two years of the grammar school, the high school, and college.

During the period of elementary instruction the child should deal mainly and preferably with things and relations in close proximity to him or clearly related to his immediate environment. He will, therefore, approach his subjects from the side of the things with which they have to do, rather than from the side of the abstractions that underlie their scientific aspects. He will deal with number, form, matter, and motion; with life, its environment and kinships; with language, literature, and song, rather than with arithmetic, geometry, physical and chemical science, biology, grammar, rhetoric, and music. Moreover, he will approach these things rather from the developing than from the didactic side; his activities will be analytic and inductive, rather than synthetic and deductive.

He will not, therefore, at first be interested in number, form, matter, and motion as such, and apart from the living things and objects of nature and art that may have enlisted his sympathy, stimulated his interest and purposes, and aided him in the play-work of his life. Yet it is desirable that he should be brought with reasonable speed to feel an active interest in certain fundamental abstractions in relation to number and form; at least, so that he may be enabled to place himself in full possession of these keys to knowledge, to synthetic skill, and creative efficiency.

The kindergarten, appreciating these considerations, brings the child, therefore, from the start into vital intercourse in social games with other children, because these appeal most keenly to his sympathies and stir into activity his inmost soul. Through these it interests the child in objects of nature and art, and in the living things in his environment which are concerned in these games. At the same time, with the help of material playthings which emphasize in their construction fundamental relations of form and number, it enables the child to give expression to his ideas and to achieve his purposes in a half-material, half-pictorial symbolism, which stimulates in his mind a vital interest in these fundamental relations, and leads him to make them direct objects of his concern.

The kindergarten places the child at once amid the rich, all-sided stimulants of full social life. From this it excludes, indeed, all that might repel or shock the child, or confuse it and lead it astray; but it provides for every essential of social tendency. It adapts every condition to the feeble self-activities of the child, that they may be fully stimulated but not strained, and is solicitous to establish ready mutual responsiveness between the child and its environment. It takes special care to give prominence in this environment to the things and activities of life, inviting the child to respect and nurture life, and to relate himself in good will to the interests and purposes of the symbolic human world of the kindergarten of which he is a

part. At the same time, the kindergarten provides as material for the child's groping, yet eager, efforts to analyze the environment, simple playthings which invite the embryo student's attention steadily and definitely to number and form relations in all that challenges his interest. Thus, on the one hand, the kindergarten holds the child's being fast in the most complex and spiritual interests of humanity, leading his life gently but surely towards free, intelligent coördination in benevolence with these interests. On the other hand, it enables him to reach speedily and in adequate clearness the simple fundamental abstractions without which he can never hope to master the conditions and to control the environment upon which the prosperous unfolding of the spiritual side of man depends.

From the kindergarten the child passes into the primary school with his life interests intensified and strengthened; eager to learn, to love, and to do, to coördinate himself with a new world on a higher plane and with wider outlook—a world, less symbolic and more specific, perhaps, yet clearly at one with the child's coming real world and nearer to it. The child is now ready to take a direct interest in number and form as such, still, however, from the analytic, inductive, experimental side, and with constant practical applications of his discoveries to concrete purposes in measuring, drawing, modeling, and other manual work, yet more and more prepared, as he advances, to appreciate the value of definitions, general statements, and classifications, and (more particularly in matters of form) quite able to formulate such approximate definitions and general truths on the basis of his own experience and thought. At the same time the increasing complexity of his number exercises (I should prefer to call them number plays) renders the material symbolism of blocks and beads, as well as the pictorial symbolism of simple drawings, quite cumbersome, and the child turns to the conventional symbolism of cyphers with the sense of relief that comes from increased freedom and added power.

The child has brought from the kindergarten an active sympathetic interest in the life of plants and animals, and is prepared to observe them more systematically, to care for them more intelligently, to record his observations, and to give intelligible accounts of his work and observations in drawing and coloring, as well as in the conventional symbolism of written characters. Naturally these observations will deal chiefly with considerations of form and color, with measurements of time and growth. This nature study will, therefore, be in vital connection with number and form study, and will react favorably upon these interests. Much is to be gained at this period by the establishment of a school-garden and by excursions into the surrounding country, not only for the further de-

velopment of a reverent and sympathetic spirit in the study and nature of life, but also for the establishment of a vital basis for the broader and deeper consideration of the environments of life, which, in due time, will lead the child's thoughts towards physical geography and related branches as specific objects of study, as well as for the further unfolding of the child's social tendencies and his interests in the occupations and institutions of man, preparing him, on the side of learning, for the specific study of historical and sociological subjects, and, on the side of life, for practical benevolence.

In the records and accounts of his work, the pictorial symbolism of drawing and coloring very soon proves inadequate, and the child turns with instinctive gratitude to tactful efforts on the teacher's part to put him in possession of the conventional symbolism of the written characters. Writing follows closely the very sounds of plastic speech, and like the latter, expresses with equal readiness the deepest generalizations of abstract thought and the minutest details of descriptive and creative fancy. Under thoughtful teaching, the child appreciates this, so that a comparatively short time will be required to induce him to take a direct interest in exercises which are concerned exclusively with the development of skill in writing, reading, and language.

Throughout this period the plastic material of the kindergarten enables the school, through synthetic applications of number and form elements in exercises akin to art, to touch the deepest springs of self-activity and benevolence in connection with every subject of instruction. These exercises, much strengthened of late by the introduction of sloyd into the work of the school, afford the children, upon their own plane of development, rich opportunities for social, as well as individual, efficiency, which designates the proximate aim of educational effort.

It will be noticed, that, during this period, the differentiation of subjects in human learning and related arts has made much progress. The child has learned to take a direct interest in number, form, drawing, natural history, writing, reading, and language. Other matters are still more or less intimately involved in the general interests of the child and connected with applied work in the differentiated subjects enumerated above. Physical and chemical phenomena, on the one hand, afford interesting material for the practical exercise of arithmetical and geometrical skill; on the other hand, they are closely connected with considerations of life environment in nature study. Similarly, considerations of geography and other matters of life environment are still deeply involved in nature study and in the anecdotes and readings which are meant to extend the child's horizon in these matters and to stimulate his

toric and scientific interest. Sociological subjects are still latent in the practical life of the child. Yet much can be done to lift them towards objective differentiation in games and plays, in the social coördination of school exercises, and in suitable talks and readings concerning the social environment of the child.

On the whole, the work during this period continues to be predominantly analytic and inductive, and concerned with the child's direct experience and immediate environment, yet with a decided leaning towards synthetic and deductive operations and frequent excursions into comparatively distant fields and relatively foreign environment, accessible to the child only with the help of imagination and the deeper apperceptive processes.

The transition from the primary to the grammar grades is significant. The child has reached the age of ten or eleven and is sufficiently well established in mental development and analytic experience to permit the school to place increasing stress upon didactic modes of procedure in instruction. He has had much practice in formulating successive results of inductive processes in approximate definitions and generalizations, so that in a number of subjects he can follow with pleasure and profit deductions from ultimate scientific statements. The organic connection of memory and the creative phases of self-activity are sufficiently assured to enable him to receive intelligently and to assimilate vitally the "recorded knowledge of the race" in more or less dogmatic and dialectic presentations by the teacher or the manuals.

The child may now approach subjects of instruction more and more definitely from their scientific side. He is prepared to study arithmetic and geometry instead of number and form; grammar instead of language; botany, zoology, geography, and later on physiology instead of life and life environments. In some of the arts, such as music, drawing, and writing, systematic instruction, based on ultimate, technical principles and in synthetic, progressive sequences, is now fully in place.

On the other hand, sociological and psychological subjects remain throughout this period in the elementary stages. The child is, indeed, prepared to interpret and to appreciate the import of myths and historical accounts, to take an intelligent interest in the economic pursuits of men and in particular phases of institutional life, to analyze motives of action and ethical impulse; but the scientific study of these things is still beyond the grasp of self-active effort on his part.

For similar reasons, the specific consideration of physical and chemical sciences should be postponed for a later period. The child, however, is competent to follow and make experiments bearing on

these subjects, to describe these and to analyze them, to arrive by inductive processes at certain proximate general statements, and to apply these in the solution of practical problems that appeal to his inventive genius, or to make use of them in efforts to explain contrivances and processes in the mechanic and industrial arts. The manufacture and arrangement of apparatus for these purposes afford much opportunity for utilizing the child's gains from whatever manual training the school may afford.

Manual training, however, should, during this period, still be closely and directly connected with the general development of the child, rather than form a distinct subject of instruction. The chief object of workshop and laboratory should be to afford opportunity for analytic work for the solution of practical problems connected with the work of the school and in which the hand plays an important part. The child should gain dexterity in the use of tools and material much in the manner in which he attains agility and strength in games and play. For this the way is indicated in sloyd as originally taught by Clauson, Kaas, and Cygnaeus. It can be achieved by the application to wider interests and greater scope of the principles that guided Fröbel in kindergarten work, and which have since been successfully extended to the manual work of the primary school. The manual work of the kindergarten and primary school gave to the child self-confidence through the use of material of ready plasticity, and the results of the child's work derived their value chiefly from their symbolic significance with reference to work and achievement. In the grammar school material is to be selected more and more with reference to the practical purpose which the finished product is to serve in actual outward life. In the primary schools only the simplest tools were used, and these chiefly in order to secure neatness and accuracy; in the grammar school, the use of tools in overcoming refractory material and in securing speedy work is of prime importance.

In its progress, however, the manual training of the grammar school continues to move steadily on the side of knowledge towards science, on the side of utility towards the industries, and on the side of creative self-expression towards art. At the same time, it continues to be the main factor in developing the social sides of the child's being, enabling him to appreciate the value and necessity of adaptation, of division of labor, of unity of purpose in benevolent coördination, of the significance of institutional life.

Hitherto the child has dealt chiefly with his immediate environment, assimilating new experiences and achievement of his own with the apperceptual capital at his disposal. In the grammar school he learns to assimilate with his own experience the experience of

others, distant from him in time and space, and accessible to him only through avenues of mutual sympathy. His individual egoistic experience expands now distinctly into the altruistic experience of his time and into the broad experience of the race; and he passes correspondingly from a more or less egoistic life-attitude through various altruistic phases of attitude to a truly humanitarian attitude, which unites and sanctifies the two.

Having finished the grammar school course (at the age of fifteen or sixteen), the young people are now ready to take up some specific occupation suited to their conditions, tastes, and aptitudes, or to enter upon courses of further training in secondary or high schools, or in technical schools. Of these, only the secondary or high schools can claim our attention here.

Strictly, in so far as these institutions are concerned, the period of education, in the sense of a systematic effort on the part of elders to guide character development, is at an end. It is true, character development still goes on, and it is of the highest importance that environment and instruction, example and precept should lie towards the ideals that gave direction to the work of the elementary school. It is true, too, that the high school should consciously confirm the student in the humanitarian life attitude into which the grammar school has led his thoughts; and it is equally true that this process of self-expansion should be supplemented by a process of self-revelation which the high school has constant opportunities to stimulate, and which alone can assure intelligent spontaneous devotion to duty on the student's part. Yet within these limitations, the chief concern of the high school is to furnish its students with an outfit of knowledge and skill which is indispensable to them in the pursuit of the special studies required for proficiency in the liberal arts or professions for which the college is to furnish special preparation.

It is needless, however, as well as inexpedient, in this sketch, to enter into details, further than to indicate, that, at least in so far as the subjects of instruction are concerned, scientific treatment and didactic modes of procedure are in place throughout the entire range of work; that the specialist and the manual are not only justified but necessary; and that more or less independent research in any direction on the student's part is no longer practiced for the sake of developing power, but rather with a view of training him in skill to apply the rules of scientific or conventional methods of work, so that in due time he may become fitted for the freedom of the college, or to enter worthily the larger freedom of a rich, practical life, in full possession of the achievements of the race, in harmony with the best tendencies of its evolution, and competent, as well as eager, to aid in its onward course.

COURSES OF PEDAGOGICAL STUDY AS RELATED TO PROFESSIONAL IMPROVEMENT IN A CORPS OF CITY TEACHERS.

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With respect to pedagogical knowledge a corps of city teachers may be divided into three classes—the informed, the uninformed, and the misinformed. Even the class first named, which is too often the smallest of the three, has need of professional improvement. This need does not show that the teachers are morally culpable, for in America we are still in the beginning of teaching as a profession. There yet abounds faith in the hoary-headed heresy, that the teacher is born, not made; and this faith causes many a school board to employ men and women without professional training, and to pay scholars rather than teachers for work mere scholars cannot do. The superintendent of schools knows that the resultant of the correlated forces of a school system should be a well-equipped, efficient teacher in every classroom, and without difficulty he decides that the highest function of his office is to help inferior teachers become good teachers and good teachers become better teachers.

Of all the means which may be used by the superintendent in the improvement of teachers, that which promises the greatest percentage of result, rich, sure, and permanent, is a skillfully directed, persistently followed course of pedagogical study. In this paper this subject is considered in its relation to a corps of teachers in a city of fifty or one hundred thousand inhabitants. It is assumed at the outset that the regular teachers' institute, to be held once a month, is something more than a mere association, and that increase of its efficiency is greatly desired.

It may be assumed, furthermore, that but one course of study is pursued by a teachers' institute during any one year. This assumption at first glance would seem subject to criticism, inasmuch as, by the one-course plan, persons differing widely in knowledge and experience are placed in the same class and are assigned the same work. That the criticism is not valid, and that, all things considered, a single course is best, these four truths are sufficient argument:

1. Pedagogical study on the part of those actively engaged in teaching has its limitations; it cannot take the place of a course of study in a school of pedagogy, and consequently, it must be confined to limits corresponding with the teacher's limitations in time, opportunity, and general condition.

2. Every one employed as a teacher in a city school should certainly possess natural and acquired powers sufficient for the achievement of a normal degree of progress in the investigation of educational topics.

3. The constant aid of the more capable teachers is needed in the correction of the misinformed and in the guidance of the uninformed.

4. The progress of the informed class, including the superintendent, depends largely upon the activity of its members in aiding the advance of the uninformed and the misinformed.

Yet unquestionably the organizing of volunteer classes to pursue courses other than the one prescribed should be approved, and still other courses, for private, individual study, should be commended; nevertheless, one course, upon which the talent and much of the time of all the teachers may be directed, not only concentrates their power but also gives unity and consistency to their work.

Of what shall the one prescribed course of pedagogical study for a city teachers' institute consist? It is obvious that the teacher's private study should not be limited to one professional subject; but it is not so plain that the institute course of study should, at any time, embrace more subjects than one. While it should be the schoolmaster's pleasure, as it is his duty, to master psychology, school management, methods, and philosophy of teaching, child study, and the history of education, yet it would be unwise for a corps of city teachers to attempt the study of all those subjects at the same time. One professional subject well learned is worth a score and more of pedagogical memory gems. To scatter one's attention is to dissipate it—to destroy it. "Beware of the man of one book," is an adage which has universal application. It is, therefore, believed, that, in a city institute, during any one session, the course of study should consist of only one professional subject. If that subject be given intensive study, much valuable material belonging to correlated subjects will likewise be studied. For example, it would be time spent with little profit for teachers to give nine or ten months to the study of psychology, if its bearings upon school management, methods of teaching, child study, and even the history of education should receive no consideration. In the proper study of any pedagogical subject every phase of school work can, and does, receive more or less attention. The principle of correlation applied here teaches that there should be one central subject, in the mastery of which all other related subjects would necessarily be made to render positive service. Therefore the exercising of great care in the selection of the subject to be studied is not so im-

portant as the practicing of wise diligence in carrying out the course adopted.

How shall a course of pedagogical study be prosecuted? Before a detailed answer is attempted, it may be well to note some general principles, which teachers, even before they enter upon a course of pedagogical study, will have no difficulty in accepting, and which will grow stronger and stronger as the work progresses.

1. Only the thirsty seek water. The teacher must be in the proper attitude toward professional improvement. He must know his need, else he will make no beginning in the work. If necessary, the superintendent should render assistance at this point, and should demonstrate as clearly as possible that one's attitude toward his profession determines his standing therein, and that especially in teaching is offered a field for infinite thought and infinite progress. It is here that the superintendent should exercise in the highest degree his power of leadership, for no wise general is willing to enter upon a campaign with indifferent soldiers unambitious of victory.

2. The casual reading of much pedagogical literature will not suffice; faithful continuous study is the one indispensable prerequisite to success. "You might read all the books in the British museum," says Ruskin, "if you could live long enough, and remain utterly an illiterate, uneducated person; but if you read ten pages in a good book, letter by letter,—that is to say, with accuracy,—you are forevermore, in some measure, an educated person." Here, again, in enforcing the importance of earnest study, the precept and the example of a leader in honest work are advantageous in all cases, and in most cases absolutely necessary.

3. Through the coöperation of a number of people engaged in the same undertaking, each will gain inspiration and strength. The work is typical of all the genuine work of civilization—all help each, and each helps all. It is this coöperative spirit that renders it easy for the will of the individual to express itself freely in right action,—even altruistic action, the very foundation of spiritual life and progress. It is, therefore, proper that what is studied in private should be discussed publicly in the institute, that important truths may be emphasized and fixed in the minds of all, that non-essential ideas may be discriminated from those essential, and that principles learned may be applied to suit local conditions. This idea has been adopted by the American disciples of Herbart, whose public discussions of educational topics follow private, individual study of those topics—a fact which may account for the pleasure, and interest, and vigor these followers of the great German manifest in debate. Any teachers' meeting for which there is little preparation

by all concerned is but the occasion for much random talk in which but few participate, while the great majority, sadder, if not wiser, impatiently submit to voluble persecution. It is what one carries to a meeting that determines, not only his contribution to others but also the contributions of others to himself. To develop spontaneous activity in each teacher, the superintendent will need all his qualities of leadership. He will quietly, persistently, encourage all to help and be helped in the sharing of the great spiritual wealth which the study of pedagogy cannot fail to develop. In the report of the committee of fifteen, Dr. Tarbell has stated the whole truth in these words: "When several capable and earnest people unite in a mutual effort to improve themselves and their work, all the conditions of progress are present."

A corps of teachers believing in the three doctrines just now discussed is ready to begin profitable work in an institute. At the beginning of the year the subject for study during the entire session should be selected by the superintendent, with the advice and consent of the teachers, and a text-book treating of the subject chosen should be adopted. A definite lesson for each month's study should be assigned from time to time. Teachers should be encouraged to extend their reading to helpful books contained in public and private libraries, and especially in the pedagogical library belonging to the city schools. To quicken and develop the spirit of research, without which one is disqualified for the office of the teacher, should be the dominating purpose of all the work—the superintendent's chief concern. He will find it helpful to prepare, a month in advance of each institute, a circular concerning the lesson assigned. In the circular may be given an outline of the topics to be discussed, questions founded upon the topics treated in the regular text, practical questions upon correlated topics, suggestions with respect to further research, and such other recommendations as may be expedient. By way of illustration, a portion of a circular used last year in the Houston institute is here given, the apology for giving it being that the chairman of the department requested that this paper give evidence of origin in the workshop rather than in the library:

The following outline, taken from White's "School Management," will form the basis of the lesson:

CONDITIONS OF EASY CONTROL.

1. The teacher should possess these qualifications.
 - (a) Good scholarship,—thorough and fresh knowledge.
 - (b) Skill in teaching and managing.
 - (c) Heart power,—love for pupils.
 - (d) Will power,—evenness and uniformity of control.
 - (e) Good eyes and ears,—acute discernment.
 - (f) Common sense,—practical wisdom in ordinary affairs.
 - (g) Positive moral character and life.

2. The teacher must be given requisite authority.
3. The teacher must have the confidence and coöperation of school officers and of patrons.
4. The schoolroom and its surroundings should be attractive.
5. Desks and seats should be comfortable.
6. The schoolroom should be properly heated, ventilated, and lighted.

The following statements, the first eleven of which are to be found in White's "School Management," rest upon a sound psychological basis, the only basis upon which a rational, permanent, and successful system of school discipline can be established:

1. Inborn gifts do not make the teacher any more than they make an artist or an artisan. Fruitful skill is the result of training, and hence it is that special training is becoming the recognized door to every skilled pursuit.
2. It is believed that more teachers are failing in discipline from inadequate scholarship than from any other one cause.
3. There are ten teachers failing in health for want of daily study to one whose health is impaired by such study. It is not overwork that impairs the health of so many teachers, but worry. (It is not overstudy, but understudy, that impairs the discipline of so many teachers.)
4. Skill in turning a grindstone is readily acquired. Crank-turning in teaching is a simple process, and hence the large number of crank-turners in our schools.
5. The highest skill is always free from the "Company, front!" of the school martinet. It secures order, but an order born of an order-loving spirit.' (Voluntary acts have mental birth preceding physical birth. Conduct, if it is not voluntary, is not good.)
6. It may be possible, and sometimes necessary, to restrain wayward pupils by authority, or to rule them by force; but they cannot be led except by true affection. There is no incentive or restraint so potent as love. Love is the last word in the vocabulary of child control.
7. The teacher's love is to be shown most conscientiously toward the pupils that need it most, not to the most deserving, but to the most needy.
8. The will has the most power in school discipline when accompanied by the silent tongue.
9. The teacher's will is most effective when unsupported by a show of force.
10. It is just as easy for two pupils to sit together all day without whispering once, as to whisper all day, provided they form the habit of sitting together without whispering.
11. Another element of governing ability is good eyes and ears; the ability to know what pupils are doing without watching them; to "take in" a school without espionage. This power may be properly called present-mindedness, as weakness in this direction is called absent-mindedness. It is soul-sight.
12. Not the most eloquent exhortations to the erring and disobedient, though they be in the tongues of men or of angels, can move mightily upon your scholars' resolutions till the nameless, unconscious, but infallible presence of a consecrated, earnest heart lifts its holy light into your eyes, hallows your temper, breathes its pleading benediction into your tones, and authenticates your entire being with its open seal.—From Huntington's "Unconscious Tuition."
13. The glory of children is unity with nature; the glory of the teacher is unity with childhood.—G. Stanley Hall.

14. Education which takes no heed of the disorderly conduct of children would not be recognized as such by the children themselves. Besides, no lesson can be given in which the holding of the reins of government by a firm yet gentle hand can be dispensed with.—Herbart.
15. Government has only a present aim in view,—the maintenance of order; while training has in view the future adult.—Herbart.
16. I confess to have no conception of education without instruction, and, on the other hand, do not recognize an instruction that does not also educate.—Herbart.
17. Interest is direct, and does not arise from emulation, or hope of reward other than that which the subject itself affords. It is not impelled by selfishness, or fear, or ambition.—Herbart.
18. The shadows in the life of this remarkable man (Paoli of Corsica) were that he was imperious and arbitrary, and so over-mastering that he trained the Corsicans to seek guidance and protection, thus preventing them from acquiring either personal independence or self-reliance.—From Professor Sloane's "New Life of Napoleon."
19. Discipline in a school, in order to be of the highest and most civilizing character, must be secured without harsh means.—Wm. T. Harris.
20. No, it is not possible, that, in introducing more liberty into the regime of school discipline, more light and more reason into instruction, the cause of developing moral energy has not been served. Let us not forget, indeed, that it is in proportion as we have more reason and more will that we are better qualified to display in life the virtues of character.—Compayne.

At the institute for which this circular was prepared many important phases of the subject treated were considered, the method of direct questioning of individual teachers and that of voluntary discussion being employed. The fact that every teacher had been studying the lesson assigned gave all that preparation which precedes a profitable meeting. The young teacher, through independent effort, had discovered some truths, and had been made ready to apprehend other truths acquired by older teachers. To the more experienced members of the corps an opportunity for thoughtful investigation had been given, for every educational question, when studied aright, presents sufficient difficulty to tempt the labor of the most intelligent, the most gifted, of men.

In conducting an institute lesson many commendable plans may be adopted, but no plan should be pursued to the exclusion of all others. "Educational Foundations," which is, perhaps, the only American periodical devoted exclusively to the field of pedagogical courses of study, furnishes many useful suggestions concerning methods of prosecuting this work. An examination of its files discloses praiseworthy evolution. Through the efforts of its editor, Mr. Ossian H. Lang, along definite lines of development, it is to-day offering great service to students of education throughout the country. Occasionally, as part of their preparation, teachers should write answers to prescribed questions, and the answers should be

read and debated in the institute following. Again, at times, written tests may be made during the progress of an institute to show the results of a month's study. "Writing maketh an exact man," says Lord Bacon, and as pedagogy, like Speaker Reed's parliamentary law, has not yet become an exact science, written pedagogical lessons can be made to serve a good educational purpose. Short, pointed papers upon subjects assigned for study or upon kindred subjects may with great caution be allowed at long intervals; but at no institute should the whole time, or even the greater part thereof, be given over to the presentation of pedagogical essays, charm they never so wisely. The principle should be kept in mind, that it is characteristic of human nature for one to enjoy work in which he himself takes an active part. At the close of a year's institute study a review, partly oral, partly written, is advisable. This review in some degree organizes the pedagogical knowledge gained during the year, gives a definite increase to the working capital of the corps of teachers, and emphasizes the one great truth governing all spiritual enterprises—"To every one that hath shall be given; but from him that hath not shall be taken away even that which he hath."

In addition to the pedagogical course of study which is to serve as a foundation for institute work, there should be courses for the teachers of the several elementary grades, one course for high school teachers, and one for school principals. The time limit of this paper forbids a discussion of these courses. Nevertheless, it seems clear that the solution of the grade meeting problem can be most easily reached through suitable, well-defined courses of pedagogical study; that similar work for high school teachers can do much to coördinate and unify and vitalize the teaching done by specialists; and that systematic study of problems of organization, of supervision, and of school curricula can be made of the highest practical benefit to principals, through whom the progress of the schools must be largely developed, and upon whom the superintendent must ever rely as his trusted counselors and coworkers.

The general plan outlined in this paper is capable of adaptation to cities of over one hundred thousand inhabitants. The superintendent of a great system of schools can have no duty more important than that of ministering to the professional spirit and power of the hundreds or thousands of teachers under his supervision. From him, through his assistants, should proceed the wholesome stimulus and the continuous direction that influence teachers to become profound students of the science of education, and that lead them, in the practice of the art of teaching, to experience the joy the artist feels when he has given fit expression to the glories his soul has seen.

WHAT SHOULD THE ELEMENTARY SCHOOL DO FOR THE CHILD?

BY MISS N. CROPSEY, ASSISTANT SUPERINTENDENT OF SCHOOLS, INDIANAPOLIS, IND.

It is not the purpose of this short paper to discuss the general theory of education nor to present a complete course of study, but to point out some needs of the elementary school which have not been so thoroughly considered by your committee and which seem important in an ideal course of instruction.

The value of the five fundamental branches is not questioned; there is no other road to the fields of knowledge.

We assume that language studies are most important, because they relate the child to the civilization in which he lives and by means of which he is to work out his development.

The ability to read implies all culture. All life, all experience, everything of which man can have any knowledge, may be translated into language. We can, however, read only what we can recognize—only something which is already in our consciousness waiting to be expressed. The effort to recognize the meaning hidden in the forms of language may help to bring our dim semi-conscious notions to clearness.

The school does not give an experience which will enable the child to make the best progress in reading. Even the mechanics of reading and language cannot be acquired by mere mechanical drill. In the past, we have lost time in trying to teach the forms of language and reading without reference to the value of their content. We have failed to make these fundamental branches of the highest use in the development of mental and moral power.

Do these five branches furnish all the material and all the conditions necessary for the development of power? Can they be successfully taught without the conditions for all-sided development?

When we consider that the introduction of machinery has taken from the child in the home much of the training in forethought, patience, persistence, directive power, and manual dexterity which the primitive industries can give, and when we remember, that, in the rush and care and burning competition of great cities the sun may no longer "shine into the heart of the child" but only into his eyes, and that religion no longer speaks to him immediately through his interpretation of nature nor through the art of ceremonies, we feel that the school must enlarge his opportunity for experience.

We find the elementary school in the city without workshop, gymnasium, or playground, and without the influence of art.

The child in the country, by means of work in the household and on the farm, receives training through observation, experiment, responsibility. If he be so fortunate as to receive, in addition to this, thorough instruction in the common branches, he has a broader course of study than most city schools can offer, though not all that his nature demands for its highest development nor all that civilization demands for successful living.

Our civilization tends toward great centers. The old farm with its primitive industries will not remain. The problem is how to bring the advantages of city and country together. We must bring the country to the city by means of industrial training and the study of nature.

Three great teachers of men and of children—art, nature, and the industries (or useful arts)—have been too little regarded in the schools. These cannot take the place of grammar, mathematics, and history, but they have an influence of great importance.

Art appeals not so much to the understanding as to the higher emotions and intuitions, and rests upon the mind's power to create ideals. All the fine arts speak the same language—man's ideal nature. Truth, reason, love, create the form beautiful. We see the spirit of man, the spirit of nature, revealed through, and yet above, the facts. Man sees himself transformed; sees nature perfected. Art says, "I am yourself as you may become." The child needs to live with and feel its influence long before we ask him to analyze it and translate his impressions into judgments.

Poetry, music, painting, sculpture, architecture should be powerful influences in the school. Each may, in a way, be translated into the other; all give a more full and complete revelation of man's nature than one alone could give. All arts have been said to form an ascending series, from architecture to poetry, at each progressive stage of which there is less dependence upon the material and more power to express the spiritual. Poetry has been regarded as the highest of arts, because, through its forms, the greatest range of thought and feeling can be expressed.

The house in which one lives has an influence, near or remote, upon one's character. Miss Peabody writes of Mr. Alcott's school: "Conceiving that the objects which meet the senses every day for years must necessarily mold the mind, he chose a spacious room and ornamented it, not with such furniture as only an upholsterer can appreciate but with such forms as would address and cultivate the imagination and the heart."

The influence of art should fall silently upon the life of the child from the time the beautiful hymn is sung over the cradle until he can understand and love the wonderful symphonies written

or sung or carved in stone. These ideals influence interests and demand expression. They produce a desire to act. If beauty is cherished only as a luxurious dream, without the desire or the opportunity to put it forth in worthy effort, it may destroy instead of purifying the will—may become realized indulgence instead of the guiding light of the ideal. Art ought to give us a sense of proportion in action. I think we find some hint of this in "The Republic" in regard to the purpose of training in music: "In selecting our soldiers and educating them in music and gymnastics, we were contriving influences which would prepare them to take the dye of the laws in perfection—the color of their opinions was to be indelibly fixed and not washed away by any such potent lye as pleasure and sorrow, fear and desire."

And "in our law of rhythms, we must not aim at a variety of them or study all movements indiscriminately, but observe what are the natural rhythms of a well-regulated and manly life; and when we have discovered these, we must compel the foot and the music to suit themselves to the sense of such a life, and not the sense to suit itself to the foot and the music."

I hope we may come to believe that temperance, moderation, sound judgment are not cheap acquirements; that they cannot be learned by scientific lectures; that they are costly, and worth all they cost; that children must be placed in an environment which will demand temperance in feeling and action; that the body is to be trained, not as if it had a separate existence and were an end in itself, but as if it were indeed the outward expression of a sound, a beautiful, a highly complex and delicately balanced mind.

Dancing is not classed as one of the fine arts, though it reveals the unity and harmony of the soul through the body. Dancing, free play, and organized games should constitute a large part of the physical training of little children; but as the mind becomes more purposeful, the training of the will should be more severe through labor and systematic gymnastics.

Music is far from being the noble discipline which it should be in the schools. We do not know half its power to idealize emotions which may become destructive, and just at a time when the uncertain and turbulent nature needs music as influence and discipline, which may bring repose through the expression of great aspirations, the child is left to find his own forms as best he may. I think the training in elementary schools should prepare pupils to sing choruses from some of the great masterpieces. I would apply the same standard to music as to literature; as far as possible both should be classic. I should be glad to see the music festival a part of every school program.

Music is one of the greatest aids to perfection in reading and oratory, and if there must be contests (of which I scarcely approve), let us have them for the garland of the master-singer and the orator, rather than for the prize to the athletic expert.

I need scarcely add, that training by means of games is valuable, under proper restrictions, and that compelling all to take part will usually keep it within the limits of legitimate recreation.

But after all has been said in praise of the value of music and other arts (and we have given but a hint of their full value), literature is the most complete expression of life, and appeals to life with most directness and power. It may not only give us a supreme moment in ideal action, but may show us the process, step by step, through which this beauty and strength have been achieved.

Literature is not to be used primarily as language teaching but for its influence upon character. This influence must speak ultimately in noble deeds and noble language. For the reason that literature is life, we can be influenced by it.

The influence of art is not through the understanding alone but by immediate sympathy. We can by imagination make the deed or the thought our own. The taste for poetry cannot be acquired by much learning about poetry. The poetry of genius is a revelation to the higher nature; it is religious and comes to the poet to him out through inner experiences of love and duty and aspiration. The word of the poet reveals us to ourselves.

The teacher must bring the facts and conditions to the spiritual vision. The understanding must serve the spirit, but its view is broadened and enriched with the view of the creative imagination.

Let us then in school the aim should be to get the general impression of the incident, to read with enthusiasm and enjoy. A child should know the larger wholes and their relation to the general conditions of life, but the exhaustive drill upon each word and phrase and each rule of grammar and spelling from the master-teacher should be avoided. The matter should be left to the child to work out spontaneously, and not dwelt upon until spontaneity and imagination are entirely lost. The time will come when the child's attention will be seen, and when a closer study of the details will bring a more conscious enjoyment. Not until the child has grasped the meaning and purpose does it become a matter of detail. The work is incidental, and it is not wise to begin with the details of grammar and geography. The masterpieces of literature belong to all times and all places. Let us give the elementary school with a great love for literature. The child should know the songs of genius word

for word and as art wholes—not in detached quotations. If they reach the secondary school without this rich experience, we know that it is very difficult to arouse an interest later.

The university has come to our aid in declaring that a written examination cannot be made to reveal all that a pupil knows of literature; that oral reading gives much of feeling and appreciation that cannot be expressed in a written test. This ought to have a very helpful influence upon the teaching of reading in the elementary school. Higher schools all believe that reading is not well taught in the grades below.

Good reading means a high degree of intelligence and an automatic command of the mechanics of the printed page; in oral reading, physical organs perfectly adapted to the utterance of thought and feeling; sympathy, courage, good temper, and vital force. It requires the training of every power of body and mind, and is therefore the greatest discipline of powers. It calls all other disciplines to its aid. The results of training, even in science and mathematics, are found in language. As the child in the school speaks more and more from interest in the subject and from real experience; as the teacher becomes a more appreciative and inspiring listener, we may hope for improvement in reading.

I have tried to call attention to the influence of art in forming ideals, the influence of ideals upon interests, and their final expression in language and conduct. The creatures of the imagination remain with us longer than the things which we call realities. We know Cordelia and Esther Summerson better than we know our best friends.

The thing we long for, that we are
For one transcendent moment,
Before the present, poor and bare,
Can make its sneering comment.

It is well understood that discipline through the common branches (reading, arithmetic, geography, history, and grammar) depends much upon preserving the right relation between thought and expression, between the theory of the subject and the art which tests the pupil's knowledge of the theory. These branches are fundamental, and may be made to include, in their extension, nearly all forms of activity; but, in my opinion, not quite all that are necessary at this period of development, when we consider that there is no reaction from the study of books through industrial training in the home. We have not the best conditions for the effective teaching of the five fundamental studies.

The useful arts are said to comprehend, not only those which "lie next to instinct, as agriculture, building, and weaving, but also

practical chemistry and the construction of all grand and delicate tools by which man serves himself."

It is the "arts which lie next to instinct" which the growing child so much needs as self-expression. The art of making a box is not so fine an art as the art of reading a poem. It does not require such a high order of intelligence; it may not even require so much vital force or muscular strength. It is a rough adjustment to things compared with the fine adjustment to thoughts. For this reason, if for no other, it is needed for the training of undeveloped minds and as a reaction from a finer nervous tension. It is a way of expressing purpose through muscular action—a training of mind through the nervous system which is valuable in itself at this period of growth, and valuable in preparing the mind and body for higher service. Its value is still greater if the motive for work be some human need, and if it be directed by some necessary relation to other studies, like mathematics and physics.

We look with alarm upon the life of growing boys in cities, without the discipline of physical labor, without any proper purposeful expression of life through physical activity, as a reaction from the tension necessary to the training of higher and more complex powers. A thorough system of industrial training I conceive to be, not a mere incident in a course of study but one of the immediate needs of the elementary school, as a condition for making all instruction more effective.

Instruction in the common branches should be more interesting, more thorough, more heroic. This can be accomplished, not by an increase in the number of hours of daily recitation but by shorter hours, greater skill and knowledge on the part of the teacher, and proper reaction for the children. I believe the quality of our work in the grammar schools would be much improved if the first four hours of the day could be given to the ordinary studies (with proper relaxations) and the afternoon to the workshop and gymnasium and one period of study. This may require more teachers, and may be one solution of the teacher's difficulty in preparing for recitations upon a variety of subjects.

It seems to me that much of the manual work now given in high schools should be given in the elementary school, and that this work should be one element in making pupils capable of more sustained, more advanced, thinking. Pupils go to the high school without material for reflection, without power of sustained effort. We have required much analysis and explanation and little information and expression.

Manual work should stop short of a high degree of skill, excepting where the skill is a necessary means to an end, as in writing.

This marks the difference between the manual training school and the trade school.

"Church and State," says Goethe, "may have reason to declare themselves dominant, but in the sciences absolute freedom is necessary. In the study of nature it is necessary to inquire whether that which has been handed down to us from the past is really to be relied on to such a degree that we may safely build upon it in the future."

I believe that the spirit of observation and investigation which is natural to children should be fostered; that the habit of investigation is a training in individual freedom, and that it is helpful if directed by proper motive. Experiment for the sake of experiment is not helpful to character.

Art rests upon nature and some direct experience of its influence is necessary to the interpretation of art. We must feel the spirit of nature in the wind, in the brook, and in the "tempered light of the woods." To the child, and to men, one of the most valuable influences of nature is the feeling of something beyond the outward appearance, which "eye hath not seen nor ear heard"—the influence of the supernatural. Art has this great blessing to bring to the soul; it can take a few elements—sense objects in their isolation—and bring them into unity with life; can create the spirit, the atmosphere which gives them supernatural power.

Each study has at last only a relative value. How to secure the right relation of powers in the individual is the greatest problem in education. What is the true relation of the spiritual powers to the understanding and the senses? And in the unfolding of these powers, how is action to be related to reflection?

No one of the factors of the child's life and growth has any separate existence. His emotions and interests influence his will and forecast his behavior. His physical state conditions in some degree his knowing and doing, and the quality of his knowing may well explain the motive and method of his deed.

We assume that there are higher and lower interests; or, at least, that normal interests may become abnormal, and that it is the right relation of interests and powers in our natures that makes for sanity and health.

I think that Charles Dickens has done much for education by placing before us so vividly the deformities of one-sided training—Richard, who had no steady purpose, no aim in life. "He had been eight years at a public school, and had learned, I understand, to make Latin verses of several sorts, in the most admirable manner. But I never heard that it had been anybody's business to find out what his natural bent was, or where his failings lay, or to adapt

any kind of knowledge to him. He had been adapted to the verses, and had learned the art of making them to such perfection, that, if he had remained at school until he was of age, I suppose he could only have gone on making them over and over again, unless he had enlarged his education by forgetting how to do it." And the Small-weed family, discarding all amusements, story books, fairy tales, fictions, and fables, "were never children, but were born, for several generations, lean, anxious-minded, complete little men and women."

We have found no better way to learn a child's needs and his capacities than in the community—the school—of which he is a part. As a citizen he has rights and duties which must be defined—must be respected. And we must in this community provide for full living, and in harmony with the complex life of the community. We should ask, as he enters the secondary school, not only "What does he know?" but "What does he love? What does he reverence and obey? To what degree, and in what ways, can he freely express his power?"

DISCUSSION.

SUPT. F. TREUDLEY, Youngstown, Ohio.—There is one part of Miss Cropsey's paper to which special attention should be given, viz., the influence of the beautiful in all its forms upon life, and the desirability of its cultivation.

There are certain elements of training that literally force themselves upon the schools, because they represent necessities that cannot be ignored. They are the equipments of the bread winner,—the man of affairs,—of those conditions of life into which men come whether they will or not.

All know what they are. But over and above these lies the domain represented by art, whose ministrations are of the utmost value to the human soul. This influence will not proceed from itself alone. The beautiful does not seem to be a necessity, and the public school must charge itself with its development.

But further, let it not be forgotten, that, in the higher ranges of thought, the beautiful invests very fully what in the lower stages of development seems commonplace or utilitarian in its aim. Take mathematics. It leads ultimately into the very mechanism of the universe, a mechanism whose order and form is beauty itself. Take literature. Literature may be but the artistic setting of history. It is history, as Froude most justly remarked, referring to Shakespeare.

Study such a life as that of the great English painter, Sir Frederick Leighton, lately passed away. The painter's art allies itself to history, to literature, to nature.

There is no such thing as complete severance. As Austin Phelps remarked, beauty, truth, and goodness are essential phases of whatever is worth study and reflection.

What the schools need most of all is the taking by the hand of art, the essentials of human instruction and beautifying them by its power and influence.

What Lowell could do as an instructor upon Dante, what Emerson could do as a teacher of philosophy, what Pierce could do in the realm of mathematics, what Barker could do in the domain of physics, the teacher must do as far as in him lies with the material upon which and with which he works.

Correlation ends in knowledge, but adequate knowledge embraces every element and relationship of the subject studied.

SUPT. C. F. CARROLL, Worcester, Mass.—In her excellent paper Miss Cropsey made reference to freedom as a necessary part of the education of children, recommending dancing as one form of physical exercise for the kindergarten. I am not certain that it should be confined to the kindergarten, and know of no reason why children in the earlier grades should not receive the benefit conferred by such exercise. Dancing has long been taught in the kindergartens of Connecticut (and there are many in the state), and has, as I understand, been introduced into the kindergartens of Detroit. Possibly it may be found elsewhere. Nothing brings into play so perfectly every part of the body; nothing so surely gives grace and beauty to movements.

Miss Cropsey's discussion of the elementary curriculum suggests that all the common forms of the human knowledge should be early introduced into our schools, and that the study of nature is especially valuable because it compels both teachers and children to deal directly with the concrete. An examination of a cross-section of the course of study of any grade of school work to the fourth or fifth shows that we have, within a few years, largely increased the content of the work of the schoolroom in the leading cities of this country. What we need most is that this problem should be formulated.

WHAT SHOULD THE HIGH SCHOOL DO FOR THE GRADUATE OF THE ELEMENTARY SCHOOL?

BY F. LOUIS SOLDAN, SUPERINTENDENT OF SCHOOLS, ST. LOUIS, MO.

The query, What should the high school do for the graduate of the elementary school? is easily answered as regards those pupils who resort to the high school for the purpose of preparing themselves for college. Here the high school is a preparatory school, and can, and should, prepare the pupil for any college that he wishes to enter, by arranging a course of study that meets the college requirements.

In many high schools the number of pupils intending to enter college is a very small factor of the total number of the school. For by far the largest number of pupils the high school is the last step in their school education. The course of study for the college class, therefore, cannot fitly apply to the high school at large.

While elementary education has a preëminently psychological aim, namely, to develop the best powers of the child, higher education, such as represented by the university, has for its aim the trans-

mission of the highest culture of our civilization and of the most lasting spiritual conquests of mankind to minds sufficiently matured to grasp them in their fullness.

The high school, in its character as a last step in public education, may be called the people's university, because its aim is to introduce a pupil to the spiritual treasures of the race; but it also is the people's university in regard to the fact that its teaching must be largely elementary and popular. The mode of teaching the high school pupil must differ essentially from the college method, because he has not had the preparatory training which the college presupposes. The high school is a continuation of the elementary school, and its work, while of a higher range, must frequently be elementary in mode of presentation and drill. In the college the course may be elective; in the high school it should be largely prescribed.

In framing the course of study of a high school, three standpoints seem possible: (1) We may consider chiefly the demands of life; (2) the greatest weight may be given to proficiency in leading studies; or (3) highest emphasis may be laid on the growth and development of the learner and his highest interests. For the sake of brevity, let us call these the realistic, the scholastic, and the ideal standpoints. It goes without saying that neither of these has ever been urged to the exclusion of the rest; but more stress has been laid occasionally on one than on the others. A purely realistic principle in the sense of preparing for a special calling would require a specializing of instruction which a school for general education could not undertake. In fact, the best preparation for life is the school which develops the strongest individuality and quick-witted and thoughtful industry.

The scholastic standpoint would determine the course of study of the high school by setting forth the needs of each individual study from the standpoint of the special teacher, and making the totality of such demands constitute the course of study.

The danger of certain defects is imminent in a plan designed from an exclusively scholastic standpoint.

The specialist will almost inevitably be driven to the conclusion that the pupil should have better preparation before he begins his work at the high school, and that a larger share of time should be given to it after he has commenced the study.

If a course of study originating in this plan were introduced, it would indeed be a case where in each study the left hand would not know what the right one is doing. Unity of work is all the more necessary because, unlike the elementary school, where the pupil is all day long in one room and under the instruction of one

teacher, he passes in the high school from room to room, and is taught by a number of persons; and the personal unity of the work which the instruction by one teacher implies does not exist in the high school. It is all the more necessary, therefore, that a unifying principle should underlie the whole course of study.

From the third standpoint, which we have called the ideal one, the aims of high school education might be thus defined:

1. The high school should communicate to its pupils the typical elements of the highest culture-achievements of the race.

2. It should bring the pupil into close touch with the spiritual life of his country and his time.

3. It should awaken and widen the higher human and civic interests in the pupil, and arouse and stimulate aspirations toward an active life in their service.

The psychological demand remains preëminent. A course of study must be formed, not merely by the requirements of the various sciences but by the laws and needs of the growing soul of youth.

High school education differs from that of the elementary school and from that of the college, but partakes of either; it is the connecting link between the two radically different educational principles which the two extremes of school education, the primary school and the university, contain. All education leads the mind to seize the world and hold it in a spiritual grasp. The principle of the elementary school is, that the world adjusts itself to the child in order that the youth may learn to adjust himself to the world. In presenting information to little children, we select, we arrange, we grade, we use all contrivances and devices which ingenuity may indicate, to help the child seize the elements of knowledge with his yet feeble grasp. As the household adjusts itself, in a measure, to the imperious baby, so serious science and the rigid world of knowledge must be modified, and altered, and rearranged, to be suitable to the childish taste and his power of assimilation. On the other end of the school career of man stands the university, where the demand is made that the student should grasp unaided the highest thoughts and systems of science or knowledge in their scientific independence. While at the beginning of man's education art predominates over matter, the art of teaching over the material of instruction (of which little can be given at a time, with much art in presenting it), there is, at the end of all scholastic life, in university teaching, much matter and less art—or rather, artifice—in presentation. Midway between these two extremes stands the high school.

In accordance with these views, a method should prevail in the high school which, while still considering the learner's difficulty, and therefore using the art of pedagogics in presenting matter, begins to lay more and more stress on the matter of instruction and less on pedagogical devices.

In the process of learning there is a double activity. Instruction makes the external world ideal, since every step in becoming acquainted with the material things in the world or the data of human relations means, that, through the process of learning, facts become ideas. Learning, however, consists, not only of receiving information, but in activity, which starts with an idea and gives to it external expression through language, the exercise of skill, or other work. Thus we find a second element in the process of learning; namely, the ideal within becomes an external reality without. When the mind is receiving information the external becomes internal; while any activity in writing, or drawing, or speaking, and the like, makes the idea actual and external. The proper play of these two sides constitutes the fullness of the educational process. Assimilation and activity, or receptivity and spontaneity, are the two poles around which the world of the schoolroom—elementary school or high school—must revolve. Where one factor predominates over the other too much, readjustment is needed.

The studies which are most closely allied to the will, and which subserve the idea of making the spiritual within real without, are the arts of expression, and they should stand in a central place in a high school course of study, extending from one end of the course to the other. We expect as one of the results of higher education, refinement in the modes of expression; clearer, richer, more forcible speech; writing, more logical in thought and more correct and beautiful in form. As a study of expression, drawing, too, should retain its place. There is a peculiar connection between studies that cultivate the art of expression and the life of the soul within. The physiological and mechanical element involved in their practice seems to open channels to the external world by which the soul finds a readier way to manifest itself and grow in strength and activity. The study of expression is of higher than merely formal value; it reacts on all the forms of receptivity, and knowledge becomes assimilated more easily and more thoroughly when there is a corresponding activity in which it is put to use. Drawing necessitates keener observation; expression, through language, requires clearer ideas; thus spontaneity helps receptivity, and activity helps assimilation.

As a further study in the direction of volitional training, gymnastics and calisthenics should not be denied a place.

Turning now to the side of receptivity, or to the studies which the pupil is to assimilate, physiology, perhaps, should be placed earliest in the course. Its importance for the preservation of healthy life renders it desirable that all high school children, even if they leave after the first year of study, should partake of this instruction.

The anatomical element in physiology should be limited; and those topics most necessary for self-preservation—especially hygiene—occupy the principal place. How to take care of the body, in health and disease, together with some information concerning the treatment of ordinary accidents [and, perhaps, some ideas in connection with nursing the sick] should form prominent topics. Life interests should predominate over scholastic interests.

In mathematics, algebra and plane geometry form the indispensable continuation of arithmetic in the schoolroom. The psychological importance of algebra lies in the pure mathematical reasoning which it requires; and while objective teaching is needed at the outset,—since the subject is new to the child,—the emphasis must be laid on that part which gives the peculiar and necessary training for which the study has a place in the high school curriculum, namely, strict and clear reasoning.

Of natural science, botany, physics, and chemistry, together with physiology or biology, seem to form a sufficient curriculum for the four years of the high school course. On the side of the humanities, general history should occupy a prominent place in the high school program; but I would add to it lessons in United States history, of much less elementary character than the corresponding study in the elementary school. In our day, economic questions stand in the foreground. While the elements of history taught in the lower schools give a child a good idea of the growth and development of our political institutions, a maturity of mind is required for the comprehension of the economic and civic topics that form the life-interests of the day which the pupil in the elementary school does not possess, and which is too important to be omitted altogether. A one-volume history of the United States, somewhat in the style of Green's "Shorter History of the English People," with more stress laid on the last fifty years than on the earlier history, would be a valuable addition to our pedagogical literature.

The study of the elements of philosophy should have a place in the higher grades of the high school, both on account of the peculiar training which this study gives and also on account of the deeper insight which it tends to produce into those profound problems which have always formed the highest aim of human thought. If an enlightened view of the world is to be one of the

results of high school education, this study may be granted a place, to advantage, in the university of the people. Connected therewith should be the lesson in ethics, including rules of conduct. Ethics will not make a human being moral, but it will deepen moral convictions by showing the nature of ethical action and by making ethical relations and principles clear and definite.

The art feeling is developed in the form of music in the elementary school; in the high school musical instruction should be continued and raised to a higher level by bringing to the notice of the pupil the noblest works, as far as they can be brought into the schoolroom. There is another side of art which the high school cannot neglect,—representative art. If drawing lessons form part of the high school curriculum, they should be connected with the history of ornament and historical design. In addition to these features, the study of the history of art, grouped around representative paintings or works of architecture and sculpture, should be embodied in the high school course.

In one form, art is studied in every high school in the country,—in the form of literature,—for which, perhaps, the artistic side (the sense of the beautiful) should receive additional emphasis.

We have spoken of language as a mode of expression; we shall now speak of it as a subject of information. In the high school the study of grammar should be carried on in two directions. It should rise to the study of style and the laws of rhetoric, and it should also trace briefly the historical development of the language, which gives the reason for existing forms, through a brief course of historical grammar.

In the study of literature great progress has been made in the last ten or twelve years by bringing the children into contact directly with the famous authors of the English tongue. In the selection of authors a historical principle should be observed and authors of the various modern periods of English literature should be read, reserving the few authors of older times, Chaucer and Spenser, for the senior year, after historical grammar has been studied to some extent. English literature, like the Greek, has the good fortune of having one grandest representative. Just as with the Greek boy the study of Homer was an education in itself, so with the English or American high school boy or girl the study of Shakespeare contains the elements of the grandest literary education. Shakespeare should be read, not only incidentally with other authors, but should be made the special object of study for a longer period,—say, for a whole year, with two or three lessons per week, in the senior class. History of literature has been justly discarded as the substitute of

literature itself, and replaced by the study of authors. As a substitute, the history of literature is certainly objectionable; but I am afraid we have begun to fail in the other direction. When a knowledge of literature has been obtained through three years' reading of English authors, it is proper and right that the development—the law of progress in literature—should be studied. A brief history of literature is a fitting close for the reading of authors.

While English stands in the foreground of linguistic training in the high school, at least one foreign language should be required.

Besides the selection of studies for the high school course and their distribution over four years, a further problem needs consideration, namely, what part of the whole subject-matter of the study should be presented. In the inductive and political sciences, in particular, the field of knowledge is practically endless in every direction, and limitation becomes a necessity. The whole field of science cannot be covered, and some principle of selection must be found.

One solution would be, to single out a few leading topics,—say, twenty or thirty typical experiments in physics or chemistry; or, to illustrate in another direction, ten or twelve authors in English literature,—and to teach these very limited selections with scholarly thoroughness, rendering the limited ground that is covered by instruction the type of the whole realm of knowledge beyond, and making the method used in teaching the few facts a key by which the pupil may unlock the other chambers in the house of science. If the whole realm of knowledge cannot be conquered, a part, at least, may be so taught that the known is the type of, and becomes the key to, the unknown which lies beyond it. The study of natural science loses its value as a means of cultivating the faculties when the method employed fails to lead to the observation of, and the activity with, the objects of nature. The tools which providence has given to man for his life in nature are his senses and hands. Instruction in science becomes unnatural when not based on the observation and activity of the pupil. Just as necessary as the acquaintance with archetypal forms of nature by direct inspection and of the observational facts by direct experiment is the unifying reasoning process. Not only the typical facts, but the leading lines of the whole field of the study should be surveyed by the pupil. These leading lines, however, cannot always be taught by experiments performed by the pupil himself, but he must receive these truths at second hand and through experiments which he witnesses but does not perform, and by literary communication through text-book and lecture. The elimination of text-book study

by laboratory work is an extreme that does not commend itself. The individual scientist knows a hundredfold more of nature than he has learned from his own personal experimenting or he would be comparatively ignorant. Thoroughness in a limited field is not at all opposed to comprehensiveness. It is, in fact, aided by a general acquaintance with the leading lines of the subject.

These considerations enable us to formulate the principle of presentation in high school work. There should be, in the first place, the thorough study of detail in connection with some typical topics, limited in number. There should be, in the second place, the study of grand and leading lines and the comprehensive survey of principles and laws. This principle is of almost universal application. In the sciences, it would mean the proper combination of laboratory and text-book work, with perhaps a preponderance of the latter. In literature it would mean a preliminary study of authors, followed by the history of literature. In history, it would imply a survey of general history, followed (not preceded) by what has been called the "intensive" study of some period. The proper selection for the latter purpose would be the history of the United States in its political and economic features since the adoption of the Constitution.

The tone of the high school should be manly. The instruction and discipline which it imparts should be worth a man's time to give and take, and worthy of adult intelligence and effort. The high school years are the period of rapid transition from childhood to manhood and womanhood.

In handing the treasures of learning to the little child of the elementary school, the teacher must stoop so that the child may be able to reach his gifts. In teaching mature youths, the teacher must stand erect and cause the youth to lift himself towards the gift held out to him from the height of manhood. Thus only will he learn to grow. The lower classes of the high school still represent childhood, the older classes the youthful adult. The method of teaching should correspond to these conditions of nature, and rise from elementary and early beginnings to scholarly interest and effort. A manly tone should permeate the whole school. The duties of citizenship should be distinctly foreshadowed by the spirit of its discipline. While the teacher's will was largely the rule of the elementary school, the governing powers of the high school should be obedience to the reasonable law of the school, based on the exigencies of the work to be carried on and a proper respect for the rights of others. The impersonal element of law gradually supersedes personal authority. In instruction, too, the tone should be manly. The high school pupil shows in his social life instinctively

where he belongs. He gravitates naturally toward the adult. The boy or girl seeks more freely the society of older persons. His relation to his parents changes from submission to companionship. The circle of his interests coincides more and more with that of the adult. His home life has changed, and he is charged in not a few cases with the duties and responsibilities of a grown person. The school had better recognize these facts of life, and turn its steps in the same direction. The age of the high school pupils suggests their treatment. They will be as old when they finish the course as the college graduate was a few generations ago. A glance at the biography of any of the eminent Americans of the earlier part of the century shows this fact. Motley and Bancroft graduated at the age of seventeen; Longfellow, Emerson, and Whitney, the philologist, graduated at eighteen; Webster and Charles Sumner at the age of nineteen.

Whatever of current literature and thought moves the interests of the cultured world should find a ready place in the every-day work of the high school. The high school should not only prepare for life; it should be a piece of the life of culture such as the best American men and women lead or desire to lead.

High school education, if the unjust charge were true that it kept youth away from the interests of life and made him insensible to its pulsations, because it locks him up in the world of the past and of scholastic and unreal abstraction, would indeed tend to unfit for life and be a failure.

The opposite course is the one which the high school should pursue with the graduate of the elementary school. It should aim at bringing him into closest touch with the highest interests of current spiritual life and to fill him with a strong desire for wholesome activity in the world of reality.

During the time that a pupil is in the high school the noble saying of Terence should ever be before the teacher's eye: "He is a human being, and nothing that relates to humanity should be without interest to him."

DISCUSSION.

PRESIDENT JOSEPH SWAIN, Indiana University.—The question before us is of fundamental importance. Every teacher who teaches in a high school must answer this question. The answer he makes may be in a general and vague way, but it is included in the product he turns out from the high school. Colleges must answer this question by their prescribed courses of study for admission. Any answer which has thus far been made must be, in the nature of things, tentative; perhaps it will,

always be so. Our knowledge at present is too imperfect for an answer of any other kind. There are too many variable and unknown factors to permit a definite solution. In its present form it is indeterminate. If this view is correct, what shall be done? We cannot stop the schools and the growth of the children while educational men are determining the unknown and variable quantities. The world not only does move, but it must move. It is easy to give a general answer. The high school should do all it possibly can, in the four years at its disposal, to develop every power of the mind and give the pupil a healthy, vigorous body. But how can this be done is the question. There are four prominent factors in our problem: (1) The mind of the child and its development when he enters the high school; (2) the teacher; (3) the curriculum; (4) the material equipments.

We do not yet know much about the mind. Psychology is still in its infancy I trust. I have been interested in learning that it is claimed that photography has of late developed to such a degree that the human skeleton can be photographed through the human flesh; that coins can be photographed through the leather of the purse containing them. Now I hope our psychologists will, in the process of time, give us such a photograph of the parts of the brain, with the use and with the possibilities and means of development of each part, so we may know with precision how much and what kind of brain power the pupils should derive from the study of so much language, mathematics, science, history or literature. What is the food upon which the mind best grows? Is the soul incased in a "pentagon," with a window on each face? Does the soul grow and prosper best when it has the properly allotted time and season for sitting by each of these windows and contemplating the phenomena presented through each in turn? Or is the soul incased in some other form, with only one great bay window from which it gets its light and view? If the latter, is it science, or history, or some other subject which makes the great central range of view, and all else merely background, shade, and color, and side light?

I hope that those who set forth the theory, that the soul has five windows through which it looks out on the world, will accumulate evidence, no matter whether it be from speculation or the facts of experience. I hope that those who believe that history or science is the backbone of knowledge, and other subjects merely ribs and riblets, will continue to investigate their theories. I hope that those who think that any one of the fields of knowledge may be made a center for a correlation of subjects may work out their theories to a logical consequence. I trust in the fullness of time, out of all these theories, when our knowledge is more perfect, we may get to some view which is clearly demonstrable, and we may be able to see what is the best curriculum for an individual case, though it is doubted whether we will ever be able to lay down any one curriculum which is best for all cases, since so far as we know there are no two minds exactly alike. Meanwhile the school must go on. What shall we do?

I have no quarrel with those who have already found the exact curriculum for the development of the child, but there are too many exact curricula, each having the same claims, to command general confidence in any one. For myself, I am inclined to believe for the present, that the high school can do most for the graduate of the elementary school by giving him as a curriculum a minimum amount of those subjects which are very generally regarded as proper subjects for his study and are representative subjects in the several fields of human knowledge, and leave the rest of the course to be selected from a wide range of subjects, partly by the student and partly by the teacher.

An examination of a large number of high school curricula of Indiana has led me to believe that the following, on the basis of four subjects five hours per week, is a safe course of study. At least three years of a foreign language, three years of

composition and literature, three years of mathematics, two years of science, and two years of civil government and history, and the remaining three years (in one subject) may well be given to music and drawing and an extension of one or more of the above lines of subjects, as the best wisdom of student and teacher may suggest. Personally I should extend as much as possible the time allotted to language in this course. Undoubtedly here experience shows that childhood is the best period to learn the elements of language, whether viewed from the standpoint of psychology or viewed as a means to an end.

The high schools should furnish the graduates of the elementary schools with more and better teachers. The high school teacher should be in scholarship an equivalent of the college graduate, and should have one year of professional training, either in a first-class normal school or a department of pedagogy in a college course. If such a teacher has studied and been taught to a purpose, he may not be able to teach some one subject as all important, but he will be able to show the relationship of each subject to all the other related fields of knowledge. He will be able to show that the general lines of study which the child pursues in the high school are merely the extension of study in lines already begun in elementary grades, assuming that the elementary instruction has been as it should be, and the child is brought to the highest development possible at that period. He will lead the child to see that the subjects studied in the high school are only elementary courses in subjects, any one of which is infinite in extent and is occupying the lifetime of the very best men the world has produced, and that there must come a time in its life, if it is to know very much about any one subject, when it must be content to study other fields of knowledge only so far as they bear on the one subject which it has selected to make its own.

The high school needs more teachers. There is not enough individual instruction. For example, take the subject of composition. An inquiry into the amount of time devoted to composition by high schools in my own state brought out the fact, that the average teacher of composition has very little time for the correction of themes written by the pupils. Unless the teacher can give considerable time to the individual needs of each pupil he cannot expect to do all he should for the graduate of the elementary school.

From the standpoint of a college man, I may say, I do not sympathize with those who would separate the students going to college into one class, giving them a special course, and those whose school period ends with the high school another course. The course which is the best preparation for life should be the best for college. The whole college course should be additional preparation for life. If the high school exists in order that the pupils may be prepared for life (and I believe it does), the college exists in order that the student may be prepared for life more abundantly.

Let the high school insist that the graduate of the elementary grade shall at least attain a minimum standard set for admission to the high school; give him a course such as the common experience of educated people and the wisdom of the teacher and the tastes of the pupil all combined, may suggest; give him a teacher with adequate scholarship and professional training, with personality and character adapted to his high calling; give him proper exercise and rest, and proper material equipment and stimulate him to his highest endeavor; and give him at the end of his high school course a burning desire and will power to take the next step, and go to the best college he can find, and the high school will at least have done some of the things that it should do for the graduate of the elementary schools.

**WHAT SHOULD THE COLLEGE AND THE UNIVERSITY DO
FOR THE GRADUATE OF THE HIGH SCHOOL?**

BY JAMES H. BAKER, PRESIDENT OF THE UNIVERSITY OF COLORADO.

Touching the theme of this paper, inquiries were sent to a large number of universities, colleges, and secondary schools. The first two questions related to the work of secondary education, and were as follows: (1) What should the high school graduate be when entering college? (2) What does he lack of an ideal education when he enters? Considering the general character of the questions, the answers are all that might be expected, and they are valuable for the limit of their range as well as for what they express, since they show, that, concerning the main purpose of education, there is nothing new to be said.

In the replies the deficiencies enumerated naturally answer to the ideals demanded, and only the positive series needs to be used. I formulate the answers that represent the consensus of the majority or appear important as individual opinions. (1) The high school graduate, when entering college, should possess a mind educated by methods that create interest and make power to think and generalize,—power to do original work. (2) He should have an acquaintance with each field of knowledge, and should show a symmetrical development of his mental activities. (3) As tending to produce greater interest, knowledge, and power, he should have been trained in only a limited number of subjects in each field; in these subjects the work should have been continuous and intensive. (4) He should have good command of English. (5) He should be well grounded in right habits and moral principles—the practice of self-control.

While this inquiry is not strictly upon the subject assigned, it shows that the difficult problems of university life are to be solved in part by the secondary schools, and that some of the failures in higher education are due to the imperfections of earlier training. It also introduces part of the discussion that follows.

IDEALS OF HIGHER EDUCATION.

The third question pertained to higher education—What should the college or university do for the high school graduate? Some of the more important opinions received may be expressed as follows:

(a) It should supplement the failures of his earlier training. There should be no chasm between secondary and higher education.

(b) It should give him a liberal education. It should offer him a course that has unity and harmony. It should cultivate the power of research. It should teach him to bring all his knowledge and all his power to bear on the problems of life.

(c) It should make him broad and then deep in some subject. It should start him in lines of study leading to his life work.

(d) It should give him high ideals of private and civic conduct. It should make a man of him.

To consider merely the subject of college ideals would be trite and unprofitable in the extreme, and I shall use some latitude in the discussion.

THE COLLEGE AND IDEAL PREPARATION.

The influence of the college should be felt in the work of preparation. That the college should be closely articulated with the high schools is an idea of modern date, and one not yet fully accepted. An examination of the admission requirements of the colleges shows a variety of demands, having no common basis in principles of education, in the standard courses of high schools, or in uniform agreement. The requirements of some colleges are imperative for specific subjects that are not fundamental, but merely rank with a series of allied subjects in a given field of knowledge. Often a method of work acceptable to one college would be rejected by another. Among reputable institutions the height of the standard varies by two years. That the dissatisfaction of the high schools with these evils is deep-seated and wide-spread can be noted in recent papers and addresses and in repeated efforts to remove them. The fault rests mainly with the colleges and universities, and the reasons that maintain unessential distinctions are absurd in the eyes of secondary school men. If absolute uniformity in college admission is not feasible, a reasonable choice of equivalents within a given department of knowledge may be allowed. At least a plan of admission may be "organized without uniformity." I have known a college to refuse four years' excellent work in science as a substitute for some chapters in a particular book on physical geography. In another instance a certain scientific school, requiring two years of preparation in Latin, refused a four years' course in Latin in lieu of the prescribed number of books in Cæsar. A joint committee has recently been appointed by the Department of Higher Education and the Department of Secondary Education of the National Educational Association to consider further the basis of connection between the high schools and the colleges. This committee consists of eminent and able men, who will accomplish important results if

given proper encouragement and aid by the National Association, and if the various local associations coöperate, instead of fostering organized differences. The report of the committee of ten did much to prepare the way for a more complete and satisfactory connection between the colleges and the high schools, but much remains to be done which may be well undertaken by this joint committee. It is interesting to note that one of the longest sections in the report of the Royal Commission on secondary education is on the "Relation of the University to Secondary Education," and that the importance of a close connection is emphasized and the means of securing it suggested.

The work of secondary education must be based on pedagogical principles and adapted to the stage of development which it represents, and the colleges must take up the work where the high schools leave it. Whatever is best for a given period of growth, is also good preparation for what follows. There should be no *saltus* in the process of general education. I do not mean that the colleges are not to help determine the preparatory courses of study; but they must regard the natural order of development in grades below the college as well as ideal college standards.

By a closer union with the high schools, the colleges may help to fashion their courses, improve their methods, and may suggest the importance of placing college educated men and women in charge of the various departments of high school work. The report of the Royal Commission previously referred to, discussing the preparation of teachers for the secondary schools, says: "So far as regards general education, they will obtain it, and in our opinion, ought to obtain it, not in special seminaries, but in the same schools and universities as are resorted to by persons desiring to enter the other professions. The more attractive the profession becomes, the larger will be the number of teachers who will feel that they ought to fit themselves for it by a university course." The report further says: "Whatever professional education is provided for teachers ought to have both a theoretical and a practical side. * * * Freedom and variety would, in our opinion, be best secured, if the universities were to take up the task; * * * and if the science of education is to make good the claims put forward in its behalf, it ought to be studied where other branches of mental and moral philosophy are fully handled by the ablest professors."

Many colleges are now doing much to increase laboratory practice in the high schools, to cultivate the spirit of investigation, to limit the number of subjects, and secure good results. In Colorado the principle is generally recognized that a good preparatory education is also a good general education, and that every high school

is therefore a preparatory school. The secondary school period is maintained at four years, laboratories are provided in all the schools, and Latin and German, if not Greek, are found in all. These results are largely due to the close relation in that state between secondary and higher education.

LIBERAL EDUCATION.

In the second group of opinions quoted the philosophy is Platonic rather than materialistic or utilitarian. It makes a student a man of ideal powers, possibilities, and aspirations. He possesses a nature whose development is an end in itself, whose well-being is of prime consideration. Liberal education aims to give the student a conscious realization of his powers without reference to material advantage through their use in a given occupation or profession. Through liberal education the student acquires ideas of universal interest and essential character. He gains a comprehensive view that enables him to estimate things at their relative value; to learn the place, use, and end of each.

That liberal education should remain the ideal of at least a large part of the college course most educators agree. Were this function of the college not a distinctive and essential one, that department of learning would of necessity be abandoned, and the direct road to practical business would be pursued. Recent addresses, representing three of the greatest American universities, agree that the function of the college is to be maintained, and that acquaintance with the several fields of knowledge is necessary to the very idea of liberal education. They agree to include the field of the languages and literature; the field of the sciences and mathematics; the subjective field—that of philosophy and psychology. In the report of the commissioner of education, just published, appears a German criticism of American education, which mentions the lack of linguistic training. The writer says: "The consequences are seen in the defective linguistic-logical discipline of the mind, which perhaps more than the discipline in mathematical forms of thought is a requisite of all profound intellectual progress, be that in linguistic or in mathematical and scientific branches." In the University of Berlin, philosophy is a required subject for all degrees.

The conservation of the ideals of the race is largely the work of liberally educated men. Some one has argued, that, not through education but through a higher standard of society and politics, will the youth of the land be reached; but society and politics depend upon ideal education and the church for their own purification.

The power of research is characteristic of modern university training, and is essential to a liberal education, as giving one the mastery of his powers. Carlyle was not far from right when he said that the true university was a library. The ability to use a library is one criterion of successful college work. Here the student gathers his own material, uses his own discrimination, formulates his opinions in the light of numerous facts and opinions, and gains self-reliance. It is the scientific method as taught by Socrates applied to all fields of study. This is the kind of work that prepares the student to grapple with the practical problems of the day.

The opinion that some portion of the college work should be prescribed appears to be well founded. This view is strengthened by the fact that many high schools are weak in one or more departments of preparation. A minimum of required work in leading departments of the college will tend to supply the deficiencies of previous training. From an inspection of the latest college catalogues, it appears that all colleges exercise some kind of supervision over the choice of studies, and most of them prescribe and determine the order of more than half of the curriculum. In choice of electives many require the group system in order that consistency may be maintained and that a definite result in some line of work may be reached.

The line of demarcation between college and university work is a variable, and the problem of definitely locating it is perplexing in the extreme. Many believe they see signs of segmentation at the end of the junior year, and predict that the senior year will adhere to the graduate school. There are many evidences, that, somewhere along the line, the period of general education will be shortened, and the tendency to specialize before the end of the college course is one proof that the change is demanded. Historically the college in America stands as a whole for liberal education, but in its later development the standard has been advanced and the period of professional education has been lengthened until the problem presents new phases demanding important readjustments. Replies recently received from many institutions of higher learning touching this question show a variety of opinions. One correspondent pithily says: "Verily we are a smattering folk. I believe both the college and the professional course should be lengthened." President Eliot advocates "a three years' course for the A. B., without disguises or complications." Estimating the replies already received numerically, something more than half favor some kind of time readjustment, to the end that the period covered by the college and the professional school may be shortened one year.

THE COLLEGE AND ACTIVE LIFE.

While defending liberal education, it may be held, that, especially while a four years' college course is maintained, it should also look toward the world of active influence and the filling of some vocation therein. The student's duties toward society must take on the modern aspect, as contrasted with the self-centered interest of the mediæval recluse. That education should aim at mere serene enjoyment of the true, the beautiful, and the good is an idea of the past. The mere recluse to-day has no meaning and no use in the world. Educated men must join the march of progress; they must take part in the solution of ethical problems; in the bettering of government and society. The world demands of them altruism, public spirit, high ideals. They should mass the forces of the past for an onward movement in the present. Old knowledge should reach out toward new and useful applications.

To these ends the college should provide for a deeper knowledge of some subject or group of related subjects. This is an essential element of general education, and also has a practical aim. The principles of the philosophical and social sciences should find concrete illustration in the present. And above all, student life should be inspired with ideas of the duties and responsibilities of citizenship.

ETHICAL IDEALS.

A public statement was recently made, that the seniors of a well-known university had less intellectual vigor and less moral power than the average man they might meet on the streets. If the charge be true, it is a matter for serious thought; but the statement should be swallowed with a large grain of salt. It may, however, serve as a text. I believe the college must assume an amount of responsibility for the character of the undergraduate student. There has been a natural reaction against some of the unwise requirements of twenty-five years ago; but the reaction may have gone too far. One of our famous universities ten years ago adopted the policy of leaving the student to his own devices and the moral restraint of the policeman; but the plan was condemned by the patrons of the institution, and to-day it exercises a wise and friendly care over the student's choice of studies, his attendance upon lectures, and his daily walk and conversation. Entire freedom in student life belongs only to the graduate schools, and to place both grades of students under one system can but prove harmful.

The ethical problems of college life are not to be solved wholly by perfunctory religious exercises, but by the spirit that pervades the whole teaching and student body, and the many ways and

means that the united efforts of earnest and devoted faculties may employ. It is a favorable circumstance, that the student, to an extent, can choose subjects in accord with his tastes; that his powers reach out toward some great intellectual interest—the whole being goes in that direction, the soul to its object. That the spirit of education is broader, more liberal and scientific is significant; the fact makes for truth and honesty. The historical method succeeds the dogmatic in history, social science, philosophy, and ethics. Men are better because they are broader and wiser, and are coming to a higher realization of truth.

No doubt the ethical life has the deepest significance for man. The great Fichte was right in claiming, that, if this is merely a subjectively phenomenal world, it is a necessary creation of mind, that we may have it wherein to work and ethically develop. I believe that institution will turn out the best men where the Baconian philosophy is combined with the Platonic, the scientific with the ideal. By some means the student should constantly come in contact with strong manhood and high ideals. It makes a practical difference whether the student believes in his transcendent nature and possibilities or in mere materialism and utilitarianism; whether his ethics is ideal or hedonistic, his view of life optimistic or pessimistic.

UNIVERSITY IDEALS.

If the question is made distinct, What should the university do for the student? there are some additional considerations.

It is enough to say of graduate courses, that they should be a warrant for extended and thorough knowledge of a group of related subjects and for original power to grasp and deal with severe problems. The candidate's knowledge and power should be publicly tested by a good old-fashioned examination and defense of thesis.

The university should refuse to admit the student to the professional schools until he has received at least the equivalent of a complete high school education. The faculties of the University of Colorado have recently entered upon an investigation of the standard of admission to the professional schools, the length of professional courses, and the relation of professional courses to the college. The results are not yet wholly formulated, and the discussion of the data collected is yet to follow. But some important facts are at hand. Very few schools of applied science in the universities require four years of preparation. Only three or four universities require that standard for their law or medical schools. Most catalogues read after this fashion: "Admission to law or medical school—a college diploma, or a high school diploma, or a second grade teacher's certificate, or evidence of fitness to pursue

the subject." Less than half of the law schools require entrance qualifications, and only twenty of them require a three years' course. All medical schools advocate a thorough scientific foundation (many of them in a very ideal way), and urge extensive laboratory practice in many special subjects. The most of them think the first two years of a medical course could well be spent without clinical work. Many colleges and collegiate departments of universities provide electives that are accepted by some schools of theology, law, or medicine for their regular first year work. In rare instances, studies covering two years are made common to the college and the professional schools. But only a few universities combine in their own organization a plan of shortening the period of college and professional study. Some of us in the West are struggling with these problems, and we look to the East almost in vain for encouragement. Some of us already require the same standard for admission to engineering courses as for admission to the college of liberal arts, and would gladly publish the same standard for law and medicine did the conditions in other sections of the country make it possible.

I quote from the "Report on Legal Education," 1893, issued by the United States Bureau of Education: "Admission to the bar in all Continental (European) countries is obtained through the universities, which are professional schools for the four learned professions—theology, medicine, law, and philosophy. In England and America the colleges and universities are chiefly schools for general culture; only a few offer provision for thorough professional studies. While in England and America the erroneous idea is still predominant that a collegiate education need not necessarily precede professional study, in continental Europe it is made a *conditio sine qua non*." We are unable to understand why great and wealthy universities with abundant students cater to numbers instead of quality, and make professional education in America a by-word. Their faculties surely cannot hold the opinion that the professional school should be the shortest and easiest avenue to money-making. No one more needs than the lawyer the power of general education to grasp all the facts relating to a subject, to weigh their value, discard the unessential, give prominence to the determining factors, to avoid fallacies, to argue intelligently scientific points which may be involved in litigation. No one more than the physician needs an acquaintance with psychology and philosophy; with the various sciences and the modern languages. No one more needs the power of judgment in view of seemingly contradictory facts and symptoms. No one more needs the ethical quality of the noble and honorable gentleman. May we not expect aid from the greater universities to maintain the standards which in theory all are ready to advocate.

SOME PRACTICAL RESULTS OF CHILD STUDY.

BY A. S. WHITNEY, SUPERINTENDENT OF SCHOOLS, EAST SAGINAW, MICH.

As so much literature bearing upon this topic has recently appeared from the pens of nearly all of the leading advocates of this line of study, I feel unwarranted in attempting little more at this hour than to present as concisely as possible a few personal observations consequent upon the direct application of child study to the practical every-day work of the schools. In so doing, however, I desire it understood at the outset, that, owing to the more thorough and scientific treatment of certain long established physical laws, it has been deemed justifiable to consider them within the scope of this paper, though well aware that the propriety of this classification may be rightly questioned.

With this explanation, then, and craving your indulgence for referring almost entirely to the work as viewed from my own supervisory standpoint, I beg leave to submit the following, somewhat in the nature of a report.

During the past school year it was deemed advisable, after some general preparation therefor had been made, to direct the attention of our teachers to the investigation of certain phases of child study, hoping thereby to arouse in them a deeper interest in child nature, to acquaint them more thoroughly with the child's growing powers and possibilities, to bring them into closer living sympathetic touch with their pupils, and at the same time to verify so far as possible the practical claims of its leading students rather than to collect large masses of facts and to attempt general deductions therefrom.

With this end in view, we first turned our attention to the investigation of vision. For this purpose a supply of Snellon's test cards was provided for the several school buildings, and all of the teachers carefully instructed how to make the proper examination. As a result, out of the 5,000 pupils whose eyes were tested, an average of between fifty and sixty per cent was found with impaired sight. This discovery was simply astounding even to teachers of long experience. It was one thing for them to read appalling accounts of defective vision, and quite another to realize its prevalence among their own pupils. It was also discovered, that, in some rooms, especially those of the younger teachers, many of the defectives were assigned to the darker and more distant sections, while those of normal powers occupied the more favored sittings. The remedy for this (readjustment) was direct and immediate, and the advan-

tages gained very great. In extreme cases, however, this was insufficient, and the desired end was sought by informing the parents of the difficulty, and strongly urging upon them the importance of consulting a physician, and, if necessary, of providing properly fitted glasses. By so doing, it was found, that, in many instances, the parents were wholly ignorant of the existing defect, and were ready and willing to follow the course suggested; that others, failing to realize the necessity, were careless and indifferent and needed enlightenment; that still others, assuming the rights accorded them as independent American citizens, had no hesitancy in informing the teachers in language more forcible than courteous that it was "their business to learn their children, and not put such stuck-up notions into their heads or make dudes out of them." But, in general, the appeals of the teachers—appeals such as the parents had never been wont to experience—met with kind and hearty responses, and have resulted in the relieving of distress and the opening of newer and brighter worlds to many a poor unfortunate.

Standing upon the vantage ground of this experience, we next turned our attention to the examination of hearing, adopting the same methods of procedure, meeting the same difficulties, and applying the same remedies as in vision. The results were even more surprising, showing a general average of twenty to twenty-five per cent of defectives. Of this number, there were many of whom most pathetic tales of physical pain, of stunted intellects, of crushed spirits, might be graphically related; but to do so would simply be multiplying the already well established evidence of our too long delay and cruel neglect.

In this connection, it may be of interest to state, that two years ago an attempt was made at our central school to iron out some of the many wrinkles necessarily incident to a graded system, by establishing a new department and placing it in charge of one of our best and most experienced teachers. This department was denominated "unclassified" in contradistinction from "ungraded" or "truant," which bears such an unsavory reputation as to stigmatize all consigned thereto. In this are placed all pupils of the grammar grades who, for various causes, are not adaptable to the work of the regular classes, hoping thereby more perfectly to adjust matter and method to individual needs and capacities than was otherwise possible. At the time of the examinations above specified, the significant fact was ascertained, that every pupil enrolled in this department was suffering from defective vision, defective hearing, or from both.

When now we consider, in view of all this, that from a fifth to a fourth of all of the pupils in our public schools are suffering from defective hearing; when we consider again the acknowledged stulti-

fyng effect of this misfortune upon the intellectual, business, and community life of each, as well as upon his capacity for enjoyment; and then, when we further consider what our best physicians assert, that, with proper care on the part of parents and teachers, this number would be reduced to two per cent, it requires no very great stretch of the imagination to compel the belief, that vastly more practical good would redound to humanity by careful systematized examination and treatment of these defectives than by so much religious devotion to the abstract mechanical "drills" of our fathers.

From the beneficial results of the eye and ear studies above described, as everywhere apparent, it was deemed vital to carry the work farther and to pursue it more systematically. Accordingly blanks, based upon the one suggested by Dr. Krohn in the December number of "*The Child Study Monthly*," were provided for permanent record of each individual pupil, the essential requirements of which are date, grade, school, name, age, sex, nationality, post office address, birthplace, birthplace of father and of mother, past and present health, causes of death of father and of mother, vision, hearing, visual comparison, and visual and auditory memory. The pupils are taken aside singly or in small groups, the various tests applied, and the facts ascertained carefully recorded. These records are then made a part of the official report of each pupil, the same as the standard items of attendance, tardiness, estimate of work accomplished, etc. While it will probably take years to realize the full salutary effect of this system, yet a sufficient amount has already been accomplished unhesitatingly to warrant the statement, that, in its influence upon the present and future status of both pupil and teacher, it is intensely practical.

Turning from the investigation of the senses, we undertook the study of children's ideas of justice, by means of the Barnes' story method, taking for the first test the well-known story of the mother who gave her child a box of paints, with which the little one painted and spoiled all of the parlor chairs, and then ran to her mother, calling out, "Oh, mamma; come and see how pretty I have made the parlor!" The question was, "What would you have said or done had you been the child's mother?" These stories are given as regular composition exercises, the teacher never revealing by look or word their real purpose, or his own beliefs regarding them. At the close of the exercise, the papers are collected, studied by the teacher, and then read to the pupils, forming topics for questions and discussion. As to its practical value, I submit the following as characteristic responses to a note of inquiry addressed to the teachers: "I never knew my pupils so well before, and never had so much sympathy for them." From another: "I never realized so fully before the indi-

viduality of my school, and the absolute necessity of treating each pupil as an individual." From another: "It gives me a much more perfect insight into the homes of my pupils, and into the parents' methods of treating their children." From another: "I never realized so fully a teacher's responsibility, as many of my own methods are plainly seen in the replies of my pupils." From another: "It is one of the most valuable exercises we have ever had, in that it shows that one of the most essential elements requisite to fit a child for highest citizenship—the cultivation of the moral judgment—has, through lack of proper exercise, been sadly neglected." These reports might be indefinitely multiplied, but a sufficient number have been given, we trust, to show the value of this study as viewed by the practical grade teacher.

Again, we have endeavored to study the child by means of the Russell "still hunt" plan, urging criticism upon the course of study and general management of the schools whenever and wherever not in perfect harmony with the best interests of the growing child as thereby revealed. In consequence, many interesting features have been observed, particularly those bearing upon the child's physical nature—his fears, high nervous tension to which he is constantly subjected, etc., of which the following from one of our teachers may be taken as a fair sample, and may well serve to raise the question as to the advisability of sending home estimates of pupils' work, even as often as semi-annually: "M., seven years old, is an unusually bright child, of a nervous, high-strung disposition; quick, active, conscientious, and of a temperament to feel very keenly either joy or sorrow. Her teacher, Miss K., does good work in school and is not at all unkind to her pupils. Three days before the semi-annual report cards were given out, M. was taken sick with the chicken pox. The first afternoon of her illness her mother was sitting beside her sewing, when M. suddenly said: 'Mamma, do you think Miss K. will mark me "W." (worthless), because I staid out on account of the chicken pox?' 'Why, no; M., I'm sure she won't. She will mark you just according to what you did when you were there.' Satisfied for just a moment; then she cried, again: 'Mamma, maybe she'll have to mark me "W." Another short silence. 'If she did, though, mamma, probably she'd just have to do it that way because I was out, the same as I have have to stay out because I got the chicken pox, and she wouldn't be to blame any more than I would.' Again the same thought and cry kept recurring all the afternoon. In the evening the mother was called out, and I promised to look after the sick child. At eight o'clock I heard a cry from the room and ran to see what was the difficulty. I found the child sitting straight up in bed with the

clothes thrown back and her black eyes blazing with excitement. She threw her little arms about my neck and sobbed out, 'Miss R., do you suppose I'll get marked "W." because I had to stay out to-day?' I took her in my arms, reassuring her as best I could, trying to quell her fear and to quiet her nervousness, and so to rock her to sleep again. Before sleep came, however, she argued with me as she had with her mother. 'Miss K. will just have to if she does, and wouldn't be any more to blame than I am for staying out because I had to.' Awakening again and again during the evening, the first thought of her mind and the first cry on her lips were, 'Do you think, maybe, Miss K. will mark me "W."?' "

This is no unusual report nor unusual incident, as every student of children knows. It is quoted simply to demonstrate, that, by focusing the attention of the teachers upon child study, it brings home to them more keenly than otherwise possible sympathetic appreciation of the "awfulness" of the nervous strain to which children of our schools are constantly subjected, and arouses in them earnest, thoughtful coöperation in all measures looking towards relief.

Again, accepting the conclusion of Burgstein and others relative to the unhygienic effects of long sessions, we have arranged for the lowest grade periods of rest at the close of every forty-five or fifty minutes of study. These periods are from ten to fifteen minutes in length, and consist of recesses, gymnastics, marches, singing, etc., as the case and the state of the weather may warrant. At times the pupils simply slide down into their seats, relax all their muscles, and close their eyes in pretending sleep, while the teacher or some pupil sings a soothing lullaby. The results have more than met our expectations. The pressure is lifted, the pupils and teachers refreshed and invigorated, and more intellectual work accomplished than before. Indeed, so great do its advantages appear from every point of view that I have no hesitancy in saying that the "no recess" plan, a plan invented and fostered, for the most part, for the benefit of the teacher, should receive our merciless condemnation, or should be absolutely prohibited by law.

Stepping into a primary room near the close of the school year, a little girl with swollen eyes and tear-stained cheeks attracted my attention. The teacher, observing this, handed me a beautiful specimen of penmanship, remarking as she did so: "R. worked on this specimen earnestly and faithfully, without uttering a whimper, until she had completed it, and then she brought it to me, threw her arms about my neck, cried as if her little heart would break, and shook as if attacked with a fit of ague." Upon inquiry it was found that a large number of the pupils of this grade exhibited the same nerv-

ous overstrain and fatigue whenever engaged in this class of work, while an examination under a large magnifying glass of the specimens mentioned confirmed only too alarmingly the conclusions above stated. It was resolved at once, therefore, to abolish this exercise, and to conduct the work at the opening of the new school year in accordance with Dr. Hall's discoveries concerning the development and use of the so-called fundamental and accessory muscles and the groups of nerve centers governing their movements. In consequence, the blackboard with full arm movement has been substituted for the fine finger exercises of the slate and pencil, three feet of room without lines and spaces being assigned each pupil. At first it was decided to make use of the base line as a sort of a guide, and the messenger, or supervisor of buildings, was instructed to cause the same to be painted. Before he had time to do so, however, our teachers had discovered, experimentally, to their great surprise, that such lines were not only unnecessary, but if used would prove an insurmountable barrier to freedom of movement—the end sought. To be sure, the pupils in the beginning did not write in a straight line; but this was quickly overcome by causing them to stand back a few feet from the board and to observe its variation. As a practical result of the application of this doctrine to the work of the first grade, as pursued in our schools, the teachers, the supervisors, and the superintendent are of one mind in stating, that never before have our pupils written so easily, so rapidly, and so well at this time of the year, and that, too, without a single case of nervous physical or mental exhaustion apparent.

In our judgment this is a grand triumph for scientific child study, and must eventually revolutionize this important branch of primary instruction.

In conclusion, I would say, by way of summation, that child study has had a very marked beneficial effect. First, upon the child, in that it has led to a better understanding of his growing powers and necessities, his periods of strength and of weakness, his physical defects and their remedies. It has also led to a keener appreciation of the physical repression and mental stultification to which he is constantly subjected and the enormous dangers arising therefrom, and to a more accurate, just, and equitable interpretation and manipulation of the motives governing his hourly conduct. And second, upon the teacher. On this point, I desire simply to confirm, from the ordinary school supervisory standpoint, what has been stated again and again by every writer upon this subject. As never before, child study has acquainted the teacher with the complexity of a child's physical and mental constitution; has magnified his concept of the child's individuality and emphasized the necessity of adapting in-

struction in both matter and method in conformity with it; and has brought him into more tender and loving sympathy with the child, into more perfect teaching relation with the child. It has also quickened within the teacher a more tender conscience, a more exalted ambition, and a keener sense of his own powers, limitations, opportunities, and responsibilities; and best of all, it has inspired him with a deep and hallowed reverence for the little lives intrusted to his care, and has engendered in him an insatiable thirst to implant within every growing breast the sacred ideals of highest manhood and noblest womanhood.

THE INFLUENCE OF THE KINDERGARTEN SPIRIT ON HIGHER EDUCATION.

BY JAMES L. HUGHES, INSPECTOR OF SCHOOLS, TORONTO, CANADA.

H. Courthope Bowen, the Englishman whose interpretation of Fröbel's principles is most perfect sympathetically and intellectually, in his admirable work on "Fröbel and Education through Self-Activity," says: "Fröbel was possessed of large and generous views on education as a whole, and on its methods and results as wholes; but it is the work which he did for the education of infants between the ages of three and seven that chiefly demands our gratitude, so far as his aims have been realized up to the present. In the future, unless I am seriously mistaken, his greatest service will be in the reforms which his principles and methods will have forced on our schools and colleges." And again: "It argues, therefore, an absolute misunderstanding of the whole matter, to callously and indifferently admit that Fröbel's ideas are true enough for the kindergarten and at the same time to deny that they have anything to do with the schools."

That Mr. Bowen's estimate of the influence of the kindergarten is the correct one is becoming more clear as the kindergarten is more widely introduced and more fully understood. The principles upon which the kindergarten is based are fundamental principles that should guide the teacher in the work of teaching and training the child throughout its school course. The application of principles should change as the child ascends through the advancing periods of its growth, but the laws of true educational development apply universally in the university as well as the kindergarten. These principles have influenced the work in schools and colleges even where the kindergarten itself is not recognized. Many men

who still speak disrespectfully of kindergartens are unconsciously influenced by its spirit, and are applying principles which would never have been clear to them if Fröbel had not objectively revealed them by his kindergarten methods.

Dr. Harris, in the preface to the "Education of Man," says: "Those who persistently read Fröbel's works are always growing in insight and in power of higher achievement." There is no teacher to whom this statement does not apply. It is as true of the college professor as of the primary teacher. No other educational writings bear re-reading so well as Fröbel's, because his insights were clearer, more comprehensive, more distinctive, and therefore more difficult of general comprehension, than those of any other writer. Men trained under old methods are unable fully to grasp his ideas, as they have no conceptions to which they can be definitely related. It requires experience and training to prepare the minds of teachers to apperceive Fröbel's ideas. The next generation, especially those who are fortunate enough to receive a kindergarten training, will apperceive Fröbel's principles more fully, and interpret him more truly than we can hope to do.

What is the kindergarten spirit? The distinctive spirit of the kindergarten is the result of Fröbel's recognition of the sacredness of the child's selfhood or individuality. He taught that every child has special power, and that its fullest growth and truest education cannot be attained unless this special power becomes the dominant element in its life—the central current to which all its other powers form tributary streams. By individuality Fröbel meant the divine element in the child—the only element possessing power to stimulate and coördinate all its physical, intellectual, and moral activities. He gave to selfhood its rightful place as the guide of the child's powers. At the same time that he trained the individual powers of a child he developed its individuality. Individuality and the individual powers should be clearly distinguished. Individuality is the originating and controlling element of character that starts the individual powers to act, and guides them while at work. The motive power of character is even more important than the operative power, and should be trained more definitely. As motive power is higher than operative power, it is more susceptible to training.

He believed that the divinity in the child, its individuality, its originality, its distinctive characteristics, its selfhood, was the part of its nature that should be most definitely trained, because on its development he based all his hope for the child itself and for its uplifting influence on its fellowmen.

He objected to every system that magnified knowledge at the expense of the child, and his whole life was a protest against the

"stamping and molding" processes of teachers who failed to recognize the sacredness of the child's selfhood. What he valued most was not power, but creative power. He summed up his conceptions of individuality in the germ thought, that, "the fulfillment of man's destiny is the representation of the divine nature within him." Towards the accomplishment of this destiny by each child he constantly aimed in working out the details of every part of his educational work. This ideal made creative freedom a logical conception, and gave it educational value. Without it the suggestion of creative power would be absurd, and spontaneity might lead to anarchy instead of harmonious growth towards truth, justice, and perfect freedom.

This foundation educational principle—the recognition of the sacredness of the child's selfhood—led Fröbel to discover the leading features of his educational system. It revealed to him the vital importance of the intelligent, systematic, and persistent study of the child. It made the child, and not the knowledge to be communicated to it, the focus of educational thought. It led him to make freedom and happiness the sources of productive interest and the essential conditions of child-development. It taught him that the divinity in the child should not be passive or merely responsive to suggestion from others, but that selfhood should be self-active,—that is, active in the conception as well as the execution of an idea; in motive as well as in deed; in originating as well as in operating; in seeing as well as in doing,—and realizing this he made self-activity the highest process of human development. It showed him that the divinity in the child should not cease to grow, but should increase in power through progressive stages, and on this he founded his law of evolution. It gave him a clear conception of the true function of the individual, as a perfect unit in the universal unity.

The study of the child, reverence for its individuality, joyousness and spontaneity, true self-activity, progressive evolution, perfect community of feeling, and coöperation in action for the accomplishment of a common beneficent purpose; these are the essential elements of the spirit of Fröbel's kindergarten.

How has this spirit influenced the higher departments of educational thought and practice?

My answer must not be understood to apply to all the higher institutions of learning. The reforms wrought by the kindergarten spirit are working gradually upward from the primary through the intermediate departments. This is natural, because at first kindergarten methods were studied much more than the principles on which they are based. Until recently high school and college men could be divided into two classes; those who denied that the

kindergarten had any educational value, and those who were graciously willing to admit that it might possibly possess some slight educational advantages for very young children. A great awakening has been going on in the best high schools and colleges during the last few years, and the indications are that the next ten years will do much to verify Mr. Courthope Bowen's predictions. The springtime is here, and the life is flowing upward to the apparently dead high school and college branches. Some of them are green with fresh leaves, and white already with the blossoms of progress that give promise of rich and abundant fruit.

CHILD STUDY. .

A deep and widespread interest has been aroused during the past ten years in high schools, normal schools, and even universities, in scientific child study. The kindergartens undoubtedly deserve the credit for arousing this general and earnest study of the child. They made the child the center of interest, and the chief agent in its own development. They became objective representations of great principles, not as theories but as vital realities in active operation. Applied principles reveal truth more definitely in an hour than the theoretical exposition of the same truth can do in a century. The kindergartens respected the child's selfhood; they elevated it above the knowledge it is intended to use; they aimed to deal with its divinity rather than its depravity; they helped to make real Emerson's ideal, that the child is the "sun of the world;" they proved that the child is the supreme educational factor; and by making these facts and principles objective, they guided the world to the study of the child, and placed educational investigation on a logical basis.

DISCIPLINE.

The kindergarten spirit has affected the discipline of the schools more than it has yet influenced the methods of teaching. In a single generation it has transformed the disciplinary agencies of the schools. Rev. J. G. Fitch said in his official report to the English government two years ago, that "the kindergarten had so thoroughly changed the discipline of the English schools that the disciplinary terms now used in the official instructions to teachers would not have been understood by them a few years ago."

Even in high schools, colleges, and universities the old autocratic, domineering, arbitrary, coercive, mandatory spirit has almost disappeared. The former antagonism between teacher and pupils or students is becoming rapidly less, and the new era of coöperative harmony has dawned in good secondary schools and universities.

Fröbel recognized the value of the teacher's guidance, but he realized very clearly that the teacher's influence might be too great. His profound respect for the selfhood of the child was so great that he would not allow the teacher to overshadow it or prevent its free growth by restrictive domination. Restriction dwarfs, coercion blights, and domination destroys individuality, and therefore Fröbel waged against them a war of extermination. He refused to destroy power in the effort to educate. His comprehension of the inter-relationships existing between all the truly developing processes of nature made him decide, that even between essential freedom and desirable control there must be a course that produces perfect harmony, so he sought the "perfect law of liberty" that he might guide childhood without destroying its spontaneity.

He believed so thoroughly in the law of evolutionary development through successive stages of human growth that he did not expect finished character in the child. He allowed little children a condition of liberty which shocked the martinets, and agitates some of them still. He denied that anarchy was caused by freedom, but asserted strongly that it was the natural result of coercive control, and that unnatural control, especially during unconscious childhood, made it self-conscious in the weakening sense, and led to a natural indifference or resistance to constituted authority in the subsequent conscious period.

He found self-activity to be the intermediary process to produce harmony between spontaneity and control, and interest to be the motive that leads to self-activity when the selfhood has not been made passive by arbitrary control. With loving sympathy as an attractive power, making the teacher a friend instead of a domineering autocrat, and with the interested self-activity of the child as the central thought in the teacher's philosophy, he knew discipline would soon settle itself in a natural way. He refused to believe that children are happier when they are doing wrong than when doing right, and never doubted for a moment that they are more contented when engaged in appropriate occupations than when idle. Productivity being, according to his philosophy, the true function of humanity, he reasoned that creative self-activity is the most perfect source of human happiness, and the only rational agency in truly developing discipline.

But, it may be answered, all children do not like to work. This statement Fröbel declined to accept. It is very likely to be true that all children do not like to do work chosen for them by their teachers, and to which they are driven by the teacher's authority. The wonder is that there is so little rebellion against work selected by others, and towards which children

are driven by authority and not drawn by interest. Even when the persuasive power is the witchery of loving reverence for the teacher, work chosen by the teacher never has the maximum of power to interest or develop, and cannot long hold the attention of the pupil or make the path of duty the path of pleasure. Fröbel held that children do love productive work if they are trained to plan it as well as perform it. "They yield themselves," said he, "in childlike trust and cheerfulness to their formative and creative interest." The methods of most schools in the past destroyed the formative and creative interest by making the pupil passive instead of active, receptive instead of executive.

During the early, unconscious period of the child's development, Fröbel would have the control of mother and kindergartner so thoroughly in harmony with the spontaneity of the child as not to be felt by it. The highest disciplinary skill of the mother or kindergartner is shown by the transference of the child's interest from evil to good in so natural a way that the child is not conscious of the external, guiding influence in making the change, or of its own surrender of one interest for another. When the child becomes conscious of its own personality, the teacher's duty is still to maintain the harmony between control and spontaneity. Now, however, both the control and spontaneity belong to the pupil. The control should become self-control, and this should be developed, first by a clear recognition of the rights of others, and second by the realization of the personal advantages resulting from self-control in subordinating the undesirable to the desirable in one's own tendencies. In the higher departments the teacher should be the confidential friend of the pupil, and not a mere dictator to whom the pupil should render unquestioning obedience. Exigencies may arise when the teacher may wisely say "Thou shalt," or "Thou shalt not," as the result of the "better choice between two evils." Such an incident is always a moral catastrophe, and the wise teacher undoes the evil so far as possible when the conditions that precipitated the collision have passed away.

As new generations of children trained in the kindergarten and filled with its spirit of individual liberty and individual responsibility rise through the schools to the universities, they will expect and receive a fuller recognition of their ability to exercise self-control and share in the management and discipline of the institutions in which they are being trained. A freer race will demand and deserve still greater freedom. When perfect freedom and full responsibility for individual action are the supreme elements in the management and discipline of colleges and universities, the young men and women in them will receive the best training in good

citizenship. Self-government must create the experiences by which the mind becomes capable of apperceiving the doctrines of political economy.

The kindergartens were proscribed by the Prussian government because they threatened the tyranny of imperialism. The imperious spirit of the schools fought against the child's right to liberty, and the tyrant schoolmaster would have proscribed it, too, if he had possessed sufficient power. But the kindergartens flourish even in Prussia, and the kindergarten spirit will soon completely overcome the spirit of imperious domination in the state and in the school.

SELF-ACTIVITY.

The schools are beginning to understand the meaning of Froebel's fundamental law of self-activity. When fully understood, this law is the most productive element in school work, and the surest test of true teaching.

There is a wide difference between activity and self-activity; between expression and self-expression.

Froebel's ideal of self-activity was distinctly his own. It includes the motive to action, as well as the action. It means more than action in response to the will or suggestion of another, teacher or parent. It is the expression of the selfhood of the child; the execution of the plan of the individual who is acting. It includes the originating and directing power, as well as the operating power of the child. The action of the pupil in response to the direction of the teacher is infinitely more productive than mere receptivity, but not so developing as action in response to his own definite motive.

True self-activity is the only certain method of coördinating the brain of the child and developing its motor centers, and of revealing the child to its teacher and to itself in fruitful self-consciousness. It is the only way of overcoming the great weakness of humanity, which is shown by the possession of knowledge beyond the power of execution—of insight greater than the power of attainment. The highest power is the power to use power.

Self-activity is the only process by which we can secure accurate thinking by our pupils. We used to believe that our pupils were thinking while we talked to them. They did sometimes think, fortunately about things quite foreign to the subject under consideration. Then we imagined that they were thinking when we showed them pictures or things, or when we performed experiments before them. Each of these successive steps was a distinct improvement, when compared with the step below it in the advancing sequence. But no good school is now satisfied even with experiments by the teacher, either for the illustration or the discovery of truth. In

chemistry, physics, botany, cooking, sloyd, and all forms of manual training, each student is supplied with apparatus or tools and material with which to perform his own experiments and note his own discoveries.

This development is the outcome of the revelation of the principle of self-activity in the kindergarten. Fröbel's exercises in the kindergarten always had two parts or stages. In the first, the class followed the guidance of the teacher in gaining new knowledge or experience; and in the second, each child applied its own knowledge and experience in the expression of its own conceptions and purposes. This revelation of the "inner in the outer," Fröbel made the basis of the growth of selfhood and the training of operative and executive power.

Nearly all schools are yet in the first stage of Fröbel's process. The second stage is much more important. The knowledge and experience of the first are of little value unless they are applied in the second stage. The real growth of the individual results almost entirely from the work of the second stage. The growth of selfhood in pupils goes on to a limited extent in schools where Fröbel's idea of self-activity has never been practiced; but its growth is not due to the schools, but to the exercise of self-activity outside of school. The teachers of the world would be startled if they could examine the brain of a man who had been compelled to submit to ordinary school processes during all his waking hours till he was twenty-one years of age. Brain growth, especially in the motor centers, and the unfolding of selfhood yet depend chiefly on the work and play of the children outside of school.

Many schools are now making a partial application of Fröbel's self-activity in some department of school work. In drawing, the teacher is not satisfied with giving new thought or new elements of beauty to the pupils; each child makes its own use of the new element in making an original design or an independent application of it in association with the knowledge previously acquired. Writing and grammar are no longer taught as ends, in good schools, but as means in self-expression. Composition is no longer a dreadful formality, but is a means of revealing in visible form the conceptions of each child. When compositions have to be written as home exercises, wise teachers do not assign the subjects, but allow the pupils to select their own subjects. True self-expression means more than a statement of views in regard to questions or subjects chosen by others; it means the expression of opinions on the subject most prominent in the mind and most vitally related to the life of the writer.

There is no department of school work in which a thorough understanding of Fröbel's law of self-activity will work greater reforms than in the work of oral reading. Thoughtful teachers are awakening to the fact that the expression of the thoughts of others does not develop power to express our own. The habit of thought expression without original thought conception prevents the development of the power to think, and destroys the natural unity between original thought and its definite expression. If a training in the full interpretation and perfect expression of the best thoughts of the greatest writers could develop the power of self-expression, then actors would inevitably be the best speakers in the world, as they are unquestionably the best interpreters of the thought and feeling of the masterpieces of literature. But, notwithstanding the fact that they are accustomed to appear regularly before large audiences, and should therefore be free from distracting self-consciousness, few actors are able to express their own views with clearness and freedom. No subject in the whole range of school work needs to be considered by teachers more carefully than the subject of reading. The methods now in use have sent out from the schools at least ninety-seven per cent of the pupils without an interest in any definite, systematic course of reading; they destroy the natural power of expression, they make pupils weakly self-conscious, and they fail to give them the highest power of true self-expression.

Oliver Wendell Holmes said: "I had no instruction in grammar or language when I was at school. I learned to write by having something to say, and trying to say it in the best way." Henry Irving said to the students of Harvard: "If you are true to your individuality, and have great, original thoughts, they will find their way to the hearts of others as surely as the upland waters burst their way to the sea."

The greatest opportunity for teachers to make valuable discoveries in their professional work is to be found in extending the application of Fröbel's law of self-activity in the methods of teaching.

PLAY.

The kindergarten, by making play an organic part of actual school work, has led teachers to regard it as an important, if not an essential, educational process, and has done much to change educational ideals and reveal the truth that the communication of knowledge is not the highest duty of the school.

Play is now recognized as the best agency in securing the complete development of the child's physical life; but it accomplishes much more than physical growth and energy. It is the best possible process by which the motor brain can be increased in size and co-

ordinated with the sensory brain. It lays the basis for energetic character. It reveals the absolute importance of individual training as an essential to the success of the club or team. Every cricket, lacrosse, football, and baseball player knows, that, if there is one weak man on the team, the whole team is weakened. Play makes clear, also, the power of organized action. These two lessons are the most important lessons the race has to learn, and play is the best objective, realistic, experimental method of revealing them.

TRUE OBJECTIVE TEACHING.

Fröbel's use of material has done much to improve the methods of using objects in school. English and American teachers at first completely failed to grasp the aim of Pestalozzi in his objective work. His chief purpose was to define and develop the senses so that they might be reliable agents of the brain. English and American teachers saw in his object teaching but a new method of acquiring knowledge rapidly and definitely, and objective teaching deteriorated into formal information lessons concerning common objects. The English Education Department proved its wisdom by prohibiting what were called object lessons in England, and their reintroduction into English schools resulted from the elevation of the ideals of teachers as a result of Fröbel's better use of material in the kindergarten. Fröbel made a much higher use of material than Pestalozzi. He aimed, not merely to define the child's powers but to develop its selfhood, by allowing it to use varied material as a means of self-expression in revealing its own conceptions and in transforming its material environment so as to subordinate it to high purposes.

MANUAL TRAINING.

Fröbel's use of material in the kindergarten has completely changed the ideals in regard to manual training. Educators now demand that all children, and not a few, shall have manual training; that manual training be given before the age of fourteen; and especially that manual training shall be introduced into schools for educational instead of economic or industrial reasons. There is an economic element in manual training, but it is subordinate to the educational element. The greatest function of manual training is brain-making. The motor brain has been neglected in the schools; manual training not only develops the motor brain but coördinates it with the sensory brain.

INDIVIDUALITY.

The recognition of the divinity in the child as shown in the kindergarten is leading to universal reverence for the child's indi-

viduality. The watchword of good schools is now freedom, not coercive domination. Teachers stand beside or behind the child when they wish to educate it to its fullest limit. The old idea was to make all the pupils as much alike as possible. The new aim is to make them as unlike as possible. God's perfect harmony and true unity are based on the perfect inter-relation of unlike things. Unity is not sameness. Perfect harmony in music results from complete and definite expression of different tones at the same time. No two parts are alike, but if each part is perfect in its distinctive quality, the unity makes a perfectly harmonious whole, and the perfection of the unity depends on the distinctive perfection of each individual part. Each child has an individuality or selfhood peculiarly its own, and its best growth and work are possible only as its selfhood is developed.

CO-OPERATION OR COMMUNITY OF SPIRIT.

The greatest lesson taught by the kindergarten is the need of a new morality, based on a better understanding of the teaching of Christ in regard to community of aim and altruistic purpose. Fröbel saw in the perfect development of individual power as a basis for complete organic coöperation of the race the only process for the upward growth of humanity in wisdom, purity, and power. The individual growth was a means, not an end. Every part of his kindergarten system leads to the higher morality of Christian community of spirit. The schools should become the greatest agencies in training the race in unity of higher purpose, and in defining proper conceptions of inter-relationships and strengthening inter-dependence. It was Fröbel's aim to make the kindergarten and the school a little world, where responsibility is shared by all, individual rights respected by all, brotherly sympathy developed by all, and voluntary coöperation practiced by all. When Fröbel's educational principles have been practiced long enough to make them dominant elements in human character, there will be an end to the illogical socialism that demands compulsory coöperation in defiance of individual rights.

Fröbel's recognition of unity was so clear that it became the fundamental law of his system. He saw unity between man and nature; between man and God; between man's physical, intellectual and spiritual natures; between his receptive, reflective, and executive powers; and between childhood, youth, and maturity. He saw, too, the unity that should exist between the studies on the school curriculum. His kindergarten is the most perfect representation of practical correlation yet wrought out. The songs, games, stories, occupations, observation lessons, and all the work done by and for

the little ones in a kindergarten, relate to one central, dominant purpose, which has some natural vital relationship to the child's life, and varies with the conditions by which the child is surrounded. Both Herbart and Fröbel saw the necessity for correlation; but to Fröbel correlation was a part of his universal law of unity, and, as usual with him, he made it a reality in his practical work, and thus the kindergarten is disclosing it to teachers.

APPERCEPTION.

Fröbel recognized the weakness of teaching which presented knowledge to the mind and trained the receptive agencies that they might bring it definitely to the mind but failed to train the mind itself to make it capable of comprehending and relating the knowledge presented to it, and neglected also to stimulate the mind so that it was anxious to receive the new knowledge and add it to the similar knowledge already possessed. The primary aim of the kindergarten, so far as mental development and mind storing are concerned, is to form apperceptive centers in the mind, so that all knowledge may be clearly comprehended and definitely related. Fröbel secured apperception in its highest and most productive form by his law of self-activity. In self-activity the originating element is the child's own mind. Activity results from interest first aroused in the mind of the individual who acts. The mind is not responsive merely to appeals from without; it is roused and reaches out with living interest to find and grasp the new facts or principles. In the kindergarten the child's apperceptive centers are first defined, and then enlarged by active—not passive, or merely responsive—interest.

NATURE STUDY.

The kindergarten is unfolding to the schools a new and higher form of nature study. Fröbel led the child to study nature, not that its store of formal knowledge should be increased but that its life might be purified and the process of its own evolution to higher life revealed. Nature was to Fröbel a temple of life. He placed the child in sympathetic touch with nature in order that it might become acquainted with life in its growth processes and in its evolution to higher life. He believed that life must be the central element in all true religious development. He knew that apperceptive centers were as essential in spiritual development as in mental growth, and he believed that the only possible way to form religious apperceptive centers in the child's nature is to bring it into loving attitude towards nature, that it may first see the life in nature, and then recognize the unseen life behind the life of nature. He would have the child reverence the life in nature so

fully as not to destroy it wantonly. He trained the child in the kindergarten to sow seeds and water the plants that came from them in order that it might realize its power to start other life to grow and help the life to still higher, grander life. The consciousness in the mind of the child that it can aid plant life to greater life will by easy transition become in the mind of the man or woman a consciousness of power to aid other human lives to nobler life. This is the most productive and most elevating apperceptive center that can be implanted in human nature.

STATE SUPERINTENDENTS' ROUND TABLE.

JACKSONVILLE, FLA., THURSDAY, FEB. 20, 1896, 2:30 p. m.

The Round Table was called to order by the Chairman, Chas. R. Skinner of New York.

There were present at this meeting the following named State Superintendents: Thos. B. Stockwell, Rhode Island; A. B. Poland, New Jersey; J. M. Carlisle, Texas; Mrs. A. J. Peavey, Colorado; D. M. Geeting, Indiana; W. N. Sheats, Florida; J. Q. Emery, Wisconsin; Oscar T. Corson, Ohio; C. R. Glenn, Georgia; W. W. Pendergast, Minnesota; John R. Kirk, Missouri; Chas. R. Skinner, New York; E. B. Prettyman, Maryland; H. R. Corbett, Nebraska.

H. R. Corbett of Nebraska was requested by the chair to act as Secretary.

The meeting was opened by Superintendent Skinner, with appropriate remarks bearing upon the importance and influence of the State Superintendent's office, the great responsibility devolving upon this officer in administering the public school system, and the advantages of conference and coöperation.

The first topic presented for discussion was "Inter-State Recognition of State Certificates and Exchange of Official Documents."

Mr. Corbett of Nebraska, being called upon to present this topic, spoke of the desirability of giving proper recognition to the credentials issued by Departments of Public Instruction in other states. The idea of giving faith and credit to the acts of one state within the bounds of another seemed to be involved. While it seemed clear that each state department should retain control of this matter without being compelled to recognize credentials from other states, it nevertheless seemed equally clear that power should be given—by the proper legislation, if necessary—for the recognition of state certificates from other states.

Superintendent Poland of New Jersey indorsed the views just presented, and compared the professions of law, medicine, etc., to that of teaching. He suggested that the same recognition of the credentials given in other studies should prevail in respect to teaching.

Superintendent Emery of Wisconsin described the laws of Wisconsin in relation to this matter.

Superintendent Carlisle of Texas observed that a distinction between teachers' credentials and those of other professions exists in the fact, that, while every individual is free to choose his own lawyer and doctor the patrons of the school had no such choice, the teacher being selected by public authority. He deemed it, therefore, proper that more stringent regulations should prevail in the granting of credentials to teachers. He observed further, that the certificates and testimonials submitted by the teacher seemed often to be misleading as to ability and scholarship. He recommended that separate credentials be issued for scholarship and for teaching ability, and that the former only be subject to inter-state recognition.

Superintendent Corson of Ohio objected strongly to any provision compelling the recognition of credentials by another state. He deemed it desirable, however, that the state department be authorized to indorse such as met its approval.

