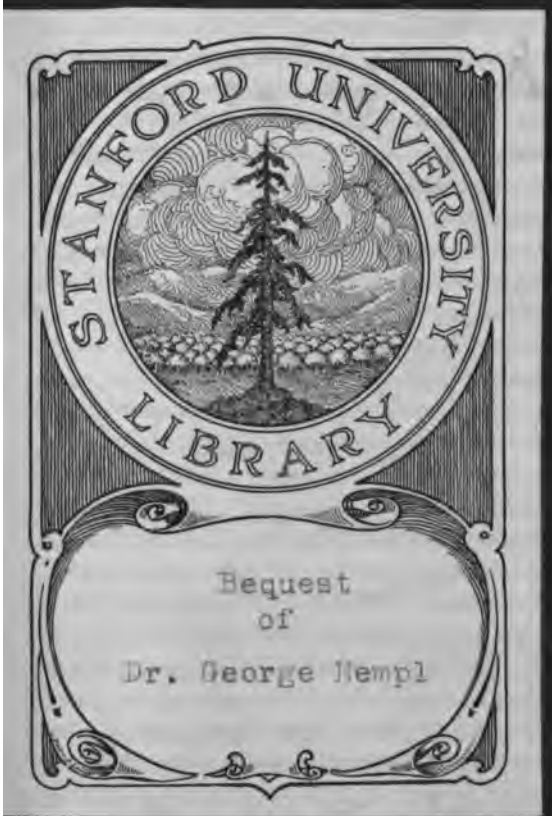
NATIONAL
EDUCATIONAL ASSOCIATION

Proceedings of the

Department of Superintendence

Louisville, Ky.

FEBRUARY, 1906



NATIONAL EDUCATIONAL ASSOCIATION

PROCEEDINGS

OF THE

DEPARTMENT OF SUPERINTENDEN

AT THE ANNUAL MEETING HELD AT

LOUISVILLE, KY.,

FEBRUARY 27, 28, AND MARCH 1, 1906

PUBLISHED BY THE ASSOCIATION

1906

PRINTED AT THE UNIVERSITY OF CHICAGO PRESS, 1906

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LOUISVILLE MEETING—1906

DEPARTMENT OF SUPERINTENDENCE

LOUISVILLE MEETING, 1906

SECRETARY'S MINUTES

FIRST DAY

MORNING SESSION.—TUESDAY, FEBRUARY 27, 1906

The Department of Superintendence was called to order in Warren Memorial Church, Louisville, Ky., at 9:30 A. M., President John W. Carr, superintendent of schools, Dayton, Ohio, in the chair.

A chorus of fifth-grade girls from the John H. Heywood School of Louisville opened the meeting with song. Prayer was offered by Rev. Peyton H. Hoge, pastor of the church. Superintendent E. H. Mark, chairman of the Louisville Local Committee, announced that Hon. J. W. C. Beckham, governor of Kentucky, was prevented by a meeting of the legislature from being present. His representative, Hon. James H. Fuqua, state superintendent of public instruction, extended a welcome on behalf of the state. Hon. Paul Barth, mayor of Louisville, extended greetings on behalf of the city of Louisville. Bishop Charles E. Woodcock, of the Episcopal Diocese of Kentucky, welcomed the superintendents on behalf of the schools.

A response on behalf of the department was made by President John W. Carr.

Two papers on "Moral and Religious Education in the Public Schools" were read, the subtitles being as follows:

a) "Means Afforded by the Public Schools for Moral and Religious Training": Thomas A. Mott, superintendent of schools, Richmond, Ind.

b) "The Effect of Moral Education in the Public Schools upon the Civic Life of the Community": William O. Thompson, president of the Ohio State University, Columbus, Ohio.

The discussion was led by William J. Shearer, superintendent of schools, Elizabeth, N. J. Others who participated in the discussion were M. M. Ramer, superintendent of public instruction of South Dakota; James M. Greenwood, superintendent of schools, Kansas City, Mo.; Henry Sabin, ex-superintendent of public instruction, Des Moines, Iowa; J. D. Simkins, superintendent of schools, Newark, Ohio; John W. Cook, president, Northern Illinois State Normal School, DeKalb, Ill.; Silas Y. Gillan, editor of the *Western Teacher*, Milwaukee, Wis.; James L. Hughes, inspector of schools, Toronto, Canada; Frank B. Cooper, superintendent of schools, Seattle, Wash.; F. Louis Soldan, superintendent of instruction, public schools, St. Louis, Mo.

Superintendent E. H. Mark, chairman of the Louisville Local Committee, announced a reception to the department by the various woman's club organizations at the Woman's Club.

The department then adjourned until 2 P. M.

AFTERNOON SESSION

The afternoon session opened at 2:30, with President Carr in the chair.

Mrs Sarah E. Hyre, member of the Board of Education, Cleveland, Ohio, addressed the department on the subject, "Woman's Part in Public-School Education."

Reuben Post Halleck, principal of Boys' High School, Louisville, Ky., read a paper on "What Kind of Education is Best Suited to Boys?"

"What Kind of Education is Best Suited to Girls?" was the subject of a paper given by Miss Anna T. Hamilton, principal of Semple Collegiate School, Louisville, Ky.

The papers were discussed by F. Louis Soldan, superintendent of instruction, public schools, St. Louis, Mo., and Charles D. Lowry, district superintendent of schools, Chicago, Ill.

W. T. Harris, United States Commissioner of Education, Washington, D. C., was introduced by the chair, and read a paper on "What Kind of Language Study Aids in the Mastery of Natural Science?"

The president announced the following committees:

COMMITTEE ON NOMINATIONS

C. M. Jordan, Minneapolis, Minn. W. F. Gordy, Springfield, Mass.
W. A. Millis, Crawfordsville, Ind. George R. Glenn, Atlanta, Ga.
Oscar T. Corson, Columbus, Ohio.

COMMITTEE ON RESOLUTIONS

E. G. Cooley, Chicago, Ill. J. H. Hinemon, Little Rock, Ark.
J. W. Swartz, Parkersburg, W. Va. C. F. Carroll, Rochester, N. Y.
Thomas J. Kirk, Sacramento, Cal. J. L. McBrien, Lincoln, Nebr.
Charles S. Foos, Reading, Pa.

On motion, the meeting adjourned.

EVENING SESSION

The program for the evening consisted of an address by Hon. Oscar T. Corson, ex-state school commissioner of Ohio and Editor of the *Ohio Educational Monthly*, Columbus Ohio, on "The Superintendent's Authority and the Teacher's Freedom;" and an address "The Teaching of Arithmetic in the American Schools," by Professor Simon Newcomb, Washington, D. C.

SECOND DAY

MORNING SESSION.—WEDNESDAY, FEBRUARY 28

The department convened at 9:30 A. M., with President Carr in the chair.

The topic "Means of Improving the Efficiency of the Grammar School" was discussed as follows:

a) "Suggestions for the Improvement of the Study Period": Frank M. McMurry, professor of theory and practice of teaching, Teachers College, Columbia University, New York City.

b) "Eliminations and Modifications in the Course of Study": Martin G. Brumbaugh, professor of pedagogy, University of Pennsylvania, Philadelphia, Pa.

c) "How Can the Supervising Influence of Grammar-School Principals be Improved?": Lewis H. Jones, president of State Normal College, Ypsilanti, Mich.

Then followed the discussion of Professor Newcomb's address by Robert J. Aley, professor of mathematics, Indiana University, Bloomington, Ind.

The topic of the morning was discussed by Charles M. Jordan, superintendent of schools, Minneapolis, Minn., and Calvin N. Kendall, superintendent of schools, Indianapolis, Ind.

BUSINESS SESSION

The Committee on Nominations submitted the following nominations:

For *President*—W. W. Stetson, Maine.
For *First Vice-President*—H. H. Seerley, Iowa.
For *Second Vice-President*—R. J. Tighe, North Carolina.
For *Secretary*—J. H. Harris, Michigan.

The report was unanimously adopted.

The following report on behalf of the Committee on Simplified Spelling was made thru its chairman, Edwin B. Cox, of Xenia, Ohio:

REPORT OF THE COMMITTEE ON SIMPLIFICATION OF SPELLING

To the Department of Superintendence of the National Educational Association:

GENTLEMEN: When our report was rendered one year ago, the question of the appointment, by the Board of Directors of the National Educational Association, of a commission to head the simplified-spelling movement and of giving such a commission funds to work with, was under consideration by the special committee of five to whom it had been referred for advice by the Committee on Investigations and Appropriations of the National Council.

The Committee of Advice reported to the National Council at Asbury Park that it was unanimous in the opinion that the simplification of our spelling is an object worthy of hearty support by the National Educational Association. But on the points of creating a commission, and of providing it with money, the committee was divided and submitted two reports. The minority, consisting of Superintendent William H. Maxwell and Professor Calvin Thomas, advised against the course advocated by a majority of your committee in conformity with your petition. The majority, consisting of President H. H. Seerley, Superintendent C. M. Jordan, and Professor George Hempl, reported in favor of the course recommended by this department.

A square deal would have taken this report under consideration before the session closed. But this was prevented by circumstances which bore the mark of design, and the report still awaits due attention. It is not the only instance in which this matter, altho indorsed by so decided a majority of this department and of the active members of the National Educational Association, has been embarrassed and hindered by the management of some who assume the rôle of an over-ruling providence in the affairs of the National Educational Association.

Should your committee persist in its effort to give effect to the will of the majority in this matter, our experience during the past three years shows that the final outcome would be doubtful. This circumstance, in connection with developments in this cause which are taking place in another field, satisfies us that it is best to abandon the object for which this committee was created and to discharge the committee.

But so important is the rationalizing of our spelling, and so closely is it related to the work and success of our teachers and schools, that it seems to your committee that the department would do injustice to itself and to the cause of education if it should fail to keep in close touch with this movement as it progresses, and at every turn to give it the utmost assistance in its power.

Therefore, we recommend:

1. That the specific purpose for which your committee was appointed be abandoned and the committee discharged.

2. That a committee of five, to continue five years and with power to fill its own vacancies, be appointed by the chair, to report at our annual meetings such matters relating to this movement as it deems worthy of consideration by the department.

Respectfully submitted,

EDWIN B. COX, *Chairman*, Xenia, Ohio;
C. N. KENDALL, Indianapolis, Ind.;
A. W. RANKIN, Minneapolis, Minn.;
H. M. SLAUSON, Ann Arbor, Mich.;
Committee.

The following motion was then adopted:

Resolved, That the specific purpose for which the committee was appointed be abandoned and the committee be discharged.

The department voted that the following resolution be referred to the Committee on Resolutions.

Resolved, That a committee of five, to continue five years and with power to fill its own vacancies, be appointed by the chair to report at our annual meetings such matters relating to this movement as it deems worthy of consideration by the department.

The selection of a place for the next meeting of the department was declared the next order of business. Chicago, Ill.; St. Paul, Minn.; Hot Springs, Ark.; and Washington, D. C., were proposed. A vote was taken, and Chicago was decided upon as the place for the next meeting.

Carroll G. Pearse, superintendent of schools, Milwaukee, Wis., made the following motion:

Resolved, That the meeting of this department for 1907 be held in the city of St. Paul, Minn., or wherever this department shall at this time determine, and that each fourth year thereafter the meeting be held in such place as the department shall determine; that in 1908, and each second year thereafter, this Department meet in the city of Chicago, Ill.; that in 1909, and each fourth year thereafter, this department meet in the city of Washington, D. C.

The department voted that the motion be laid on the table.

The meeting then adjourned.

AFTERNOON SESSION

ROUND TABLE SESSIONS

A. ROUND TABLE OF CITY SUPERINTENDENTS OF LARGER CITIES

The round-table conference was held in Warren Memorial Church; leader, Miss Ida C. Bender, supervisor of primary grades, Buffalo, N. Y.; secretary, Franklin S. Hoyt, assistant superintendent of schools, Indianapolis, Ind.

Topic—"Interrelation of Functions in a City School System."

The following papers were read:

a) "Relation of the Superintendent to the City School System": F. Louis Soldan, superintendent of instruction, public schools, St. Louis, Mo.

b) "Relation of the Supervisor to the City School System": Miss Ada Van Stone Harris, supervisor of kindergartens and primary schools, Rochester, N. Y.

c) "Relations of the City Normal and Training School to the City School System": Mrs. Ella Flagg Young, principal of the Chicago Normal School, Chicago, Ill.

B. ROUND TABLE OF CITY SUPERINTENDENTS OF SMALLER CITIES

The round table was held in the Auditorium of the Walnut Street Church; leader, John H. Phillips, superintendent of schools, Birmingham, Ala.; secretary, M. E. Pearson, superintendent of schools, Kansas City, Kans.

"The Local Training School as an Agency in the Preparation of Teachers" was discussed by James M. Greenwood, superintendent of schools of Kansas City, Mo.; W. F. Gordy, superintendent of schools of Springfield, Mass.; and others.

A paper was read by William McKendree Vance, superintendent of schools, Miamisburg, Ohio, on "The Best Means and Methods of Improving Teachers Already in Service."

The discussion was led by Edwin L. Holton, superintendent of schools of Holton, Kans.

W. M. Davidson, superintendent of schools, Omaha, Nebr., spoke on "The Advantages and Limitations of Pupil Government in the High School."

C. ROUND TABLE OF STATE AND COUNTY SUPERINTENDENTS

The round table was called to order in the lecture-room of the Walnut Street Church at 2:30 P. M. by Superintendent C. P. Cary, of Wisconsin. H. A. Dean, superintendent of schools of Kane County, Geneva, Ill., was appointed secretary.

State Superintendent Fassett A. Cotton, of Indiana, read a paper on "The Minimum-Salary Law and How it Operates." This paper was discussed by State Superintendents Nathan C. Schaeffer, of Pennsylvania; Thomas C. Miller, of West Virginia; W. L. Stockwell, of North Dakota; W. T. Carrington, of Missouri; and James B. Aswell, of Louisiana.

State Superintendent J. W. Olsen, of Minnesota, read a paper on "Rural School Architecture." Mr. Olsen had plans for a one-room and a two-room schoolhouse in a pamphlet prepared for the occasion. John R. Kirk, president of the State Normal School, Kirksville, Mo., discussed the subject, showing plans of a model rural school building to be erected on the normal-school grounds.

On motion, a committee, consisting of John R. Kirk, J. W. Olsen, and C. P. Cary was instructed to devise means for furnishing the plans and specifications of rural school buildings to members of the round table who might wish to use them.

D. ROUND TABLE CONFERENCE ON SIMPLIFIED SPELLING

The conference met in the First Christian Church; leader, William H. Elson, superintendent of schools, Grand Rapids, Mich.; secretary, H. M. Slauson, superintendent of schools, Ann Arbor, Mich.

The leading paper was read by Chancellor E. Benjamin Andrews, of the University of Nebraska, who was followed by Professor George Hempl, of the University of Michigan; J. Geddes, Jr., professor of Romance languages, Boston University, and others.

At the close of the discussion, the following resolution was offered by President David Felmley, of Normal, Ill., and unanimously adopted:

Resolved, That we urge the Department of Superintendence to ask the National Educational Association to appoint a commission to prepare a spelling primer containing a number of the most easy and obviously desirable improved spellings recommended by the London Philological Society and the American Philological Association; that the National Educational Association approve the use of these words and the introduction of this primer as an alternative. We further recommend this preface to the proposed primer: "The improved spellings in this little book are not yet customary, but it is desirable that they become customary. They have the approval of the very best authorities in the English-speaking world. Teachers who choose to teach them may do so with the feeling that they are performing an important social service. Pupils who choose to use them may do so without thereby incurring the odium of illiteracy."

EVENING SESSION

The program for the evening was as follows:

An address, "The Incorrigible Child," by Miss Julia Richman, district superintendent of schools, New York City.

An address, "The School Court," by Ben N. Lindsey, judge of the Juvenile Court, Denver, Colo.

THIRD DAY

MORNING SESSION.—THURSDAY, MARCH 1

The meeting was called to order by President Carr at 9:30 o'clock.

The chair introduced John C. Eberhardt, ex-president of the American Association of Opticians, and member of the Board of Education, Dayton, Ohio, who read a paper on "The Examination of the Eyes of School Children."

James H. Van Sickle addressed the meeting on "What Should Be the Basis for the Promotion of Teachers and the Increase of Teachers' Salaries?"

The third paper on the program, "The Next Step in the Salary Campaign," was given by David Felmley, president of Illinois State Normal University, Normal, Ill.

The papers of the morning were discussed by Miss Adelaide S. Baylor, superintendent of schools, Wabash, Ind.

The next topic, "Phonetic Key Notation," was presented by George Hempl, professor of English philology and general linguistics, University of Michigan, Ann Arbor, Mich.

The department adjourned to meet at 2:30 P. M.

AFTERNOON SESSION

The meeting convened at 2:30 P. M.; President Carr in the chair.

The topic "Industrial Training in the Public Schools" was discussed in the following order:

a) "What Form of Industrial Training is Most Practical and Best Suited to the Country Child?": O. J. Kern, superintendent of schools of Winnebago County, Rockford, Ill.

b) "What Form of Industrial Training is Most Practical and Best Suited to the City Child?": Charles H. Keyes, superintendent of schools, South District, Hartford, Conn.

c) "Art as Related to Manual Training": James Edwin Addicott, principal of Newman Manual Training School, New Orleans, La.

The Committee on Resolutions then offered thru its chairman, Superintendent E. G. Cooley, of Chicago, Ill., the following report, which, upon motion, was unanimously adopted:

Resolved, That the thanks of the department are hereby tendered to Superintendent E. H. Mark, the Local Committee, and the subcommittees thereof, for their untiring efforts to secure adequate arrangements for the success of this meeting; to the Affiliated Women's Clubs, the Girls' High School, and others for their efforts to make our stay in Louisville pleasant; to the Press of Louisville, for the prominence given to the reports of our meetings; to the citizens, and to the teachers and pupils of the Louisville schools, for the generous reception given to our members; to the railroads, which have treated the membership generously in the matter of rates; to the president and other members of the department, for the excellent program prepared for our meeting.

Resolved, That this department approves of the bill now before Congress extending the franking privilege to the state educational departments, covering the mailing of reports and other official documents, and urges the passage of the same.

Resolved, That we believe that the interests of educational progress and of this department require specialization, with its resultant definite attention to particular problems and conditions. We therefore recommend that the programs of this department be devoted to a discussion of the duties and responsibilities of school administration, management, supervision, and organization.

Resolved, That this department is in hearty accord with that part of the recent report of Hon. James Wilson, secretary of agriculture of the United States, in which he encourages the teaching of elementary agriculture, and we respectfully request Congress to grant the appropriation of $13,620 which he has asked for, to enable him to investigate and report upon the present condition and progress of agricultural instruction in institutions in this and foreign countries.

Resolved, That, since it is essential to the successful teaching of industrial subjects in the public schools that teachers shall first be trained for this work, we urge the state normal schools to give special attention to instruction in elementary agriculture, manual training, and domestic science.

Resolved, That, in order to enable the normal schools to meet the extraordinary expense of properly equipping themselves for instruction in elementary agriculture and manual training, we urge upon Congress the adoption of the Burkett-Pollard Bill, now before that body, making appropriation to the several states for this purpose.

Resolved, That this department takes this occasion to express its sympathy with the efforts now being made in various parts of our country to combat the pernicious influence upon our youth of the fraternities and sororities now found in some of our secondary schools. The recent decision of the superior court of Washington assuring the boards of education of that state of their right to fix reasonable regulations, and to attach reasonable penalties to enforce the regulations, necessary to control these fraternities and sororities, is a cause of heartfelt congratulation to all friends of the common schools. These undemocratic organizations threaten to change the entire character of the public high school, and must be controlled or abolished.

Resolved, That the efforts made by many committees of our country to secure more adequate salaries for the teachers in the public schools give great hope for their increased efficiency in the future. We wish also to express the belief that the efforts now made by many of our cities to discriminate in schedules of salaries between the more and the less efficient teacher, and to recognize efficiency as well as time in fixing the position of the teacher on the schedule, is a distinct recognition that the child, as well as the teacher, is entitled to consideration in fixing the position of a teacher upon the salary schedule.

E. G. COOLEY, of Illinois, *Chairman*.
CHARLES S. FOOS, of Pennsylvania.
THOS. J. KIRK, of California.
J. W. SWARTZ, of West Virginia.
JOHN H. HINEMON, of Arkansas.
C. F. CARROLL, of New York.
J. L. MCBRIEN, of Nebraska.

President Carr then took occasion to thank the men and women who were on the program for their promptness and efficiency in discharging their duty.

He also extended thanks to the officers of the association for their courtesy and co-operation in making the meeting a success.

On motion, the department adjourned.

ELLA C. SULLIVAN, *Secretary*.

PAPERS AND DISCUSSIONS

THE MEANS AFFORDED BY THE PUBLIC SCHOOLS FOR MORAL AND RELIGIOUS TRAINING

THOMAS A. MOTT, SUPERINTENDENT OF SCHOOLS, RICHMOND, IND.

The appreciation of the meaning and scope of education is the greatest problem before mankind. The supreme center in all education is the child in its relation to its environments. What is the child, its development, the end in view, the means to be employed, its relation to nature, to society, to divinity, are all questions which demand our attention in considering the subject of the method and scope in education.

No scheme of education has any claim upon our consideration unless it is founded upon some true view of the proper conduct and outcome of life. The problems of religious and moral education are a part of the problem of education as a whole. True education is a unitary process. It is a life-process. In a large sense, we are wrong when we think of religious education, moral education, intellectual education, and physical education as distinct processes.

"Civilization, man's spiritual environment, is made up of man's art, his science, his literature, his religious beliefs, and his institutional life." Into one of these divisions we may put each of the results of human aspiration and human achievement. Real education for any normal child must include a knowledge of each of these elements of the social activity of the race, as well as an insight into them all, and a sympathy with them all.

We cannot think of the *end* of education being citizenship, parenthood, economics, industrialism, trade, or language. We must look upon man in the full roundness of character, in all beauty of body, of intellect, of heart, of will, beneficent and strong as a worker, as the ideal product of the highest educational process. The *end* must ever be *character*, based upon true habits of moral conduct, and a strong religious faith.

The place and importance of religion as an element in human life hardly need discussion. The fact is that there has not been a single tribe or people known to history which has been shown to be destitute of religious thought of some form. Religion is a part of man's psychical being. In the nature and laws of the human mind, in the intellect, emotions, sympathies, and passions, lie the well-springs of all religion, modern or ancient, Christian or heathen. To these we must refer, and by these we must explain, whatever

errors, falsehoods, bigotry, or cruelty have sustained man's creeds; to these we must credit whatever truth, beauty, piety, and love have glorified and hallowed his long search for the perfect and the eternal.

There seems to be a general response from the human heart, as well as from history, to that clear statement of Hegel's when he says:

> Religion is for our consciousness that region in which all enigmas are solved, all the contradictions of deep-reaching thought have their meanings unveiled, and where the voice of the heart's pain is silenced—the region of eternal truth, of eternal rest, of eternal peace.

We believe that the field for moral and civic instruction is quite distinct from religious training. The moral phases of life are closely related to religious life, but the two are quite separate. Dr. Butler calls attention to the fact that religion has not infrequently in the history of the world been immoral in its influences and tendencies, and insists that to confuse religion with ethics is to obscure both. Religion must be apprehended as something distinct from ethics and morality, if apprehended at all. If the history of civilization bears unerring testimony to any one proposition, it is that morality for its highest efficiency requires some kind of religious basis. And the truest and highest forms of religious life demand a perfect code of moral life.

A system of morality based upon mere expediency, solely deductions from human experience, or upon utilitarian grounds, can never produce the highest moral life. Some kind of religious belief, sanction, aspiration, lies at the foundation and root of every system of morality that has borne noble fruit in the world. In the conflict of life, when in the midst of success or failure, temptation, despair, or sorrow; when the battle of life is strong between the forces of good and evil, the human heart finds little aid in questions of expediency, utility, or custom, but intuitively reaches upward in hope of aid and inspiration from an infinite and all-loving, all-powerful God and Father.

It is significant that religious and moral instruction should be so often joined together in our thought of educational processes. In the very nature of the development of personal character, they are necessarily involved. But for the sake of clear thinking, and for the purpose of this paper, I shall consider them separately, first dealing with the opportunities afforded in the common school for efficient moral training.

The cry of the times is for more effective moral instruction in the schools. The demand is becoming more and more insistent that the output of the schools shall have a higher moral basis. Some are declaring that the public schools are immoral, and that *character-training* is not the high aim of their work.

Show me a school in which the standard of discipline is low; in which the incentives to work and duty are based upon fear, pride, or selfishness; where the demand upon pupils is not for exact results; where the teacher's character is unchristian or immoral, and I will show a school that is immoral in its tendencies. But the well-ordered school, under the direction of the

teacher with strong character, is, next to the true home, the best place known to man for the development of character.

The *Syllabus on Ethics* issued in New York City begins with the sentences:

> The personality of the teacher is at the root of all moral education in the school. The teacher's ideals, sincerity, poise, self-control, courtesy, voice, manner of dress, and attitude toward life, are potent forces for character-building.

The *government and discipline* of the school afford the best of opportunities for character-training. In fact, the fundamental function of school government is the training of the pupils in habits of self-control and self-direction. Moral training consists primarily in the practicing of the moral virtues and the development of rich moral habits. Every power of the soul is developed by appropriate moral activity.

Low standards of discipline and conduct, and low incentives to moral action, if continued thru the formative years of life, usually result in weak character. The foundations of immoral character are usually laid during childhood, resulting from lack of proper control, or control thru a low order of incentives. The first step in a life of intemperance is not usually the first drink, but is to be found back in childhood, when indulgence resulted in the failure to form the habit of self-control and self-mastery.

In the best-governed school or home the lower incentives to action, such as fear and motives based upon selfishness, are seldom, if ever, appealed to. It is all-important in every well-ordered school, where the development of character is the first aim, that the child shall be prompted to right action by true and unselfish incentives. Dr. E. E. White named nine royal motives to action: desire of good standing, desire of approbation, desire for knowledge, desire for efficiency, desire for self-control, desire for future good, sense of honor, sense of right, sense of duty. In the school where these incentives are uppermost, and right standards of conduct are insisted upon, there should come into the life of the child many fixed habits which will form the foundation of true moral character. Dr. White also names ten habits or virtues which should be secured in every good school, and the practice of which forms the basis of moral training. These are: regularity, punctuality, neatness, accuracy, silence, industry, obedience to authority, truthfulness, kindness, justice to associates.

The life of the school as a little community forms the basis for early training in civic morality. The school is the first institution outside of the home with which the child comes into intimate relation. The conditions which first caused the rise of morality in the race are here reproduced, in a measure, as he becomes a factor in the school community. Here to his own will are imposed the wills of others, and he must respect the rights of his associates as equal to his own.

The first moral effect of the school life, as representing the child's first contact with institutional life outside the home, is best attained when the teacher, in directing and governing the school, subdues the personal element

in himself, and bases all rules of conduct on the duty of each child to respect the rights of others and the good of the school. Rightly understood, the organization and government of a school are a constant and highly important factor in moral education of children.

The regular work of the schoolroom may be to the child an element of moral strength, or it may have its immoral tendency according to the way in which it is done. The habit of doing each day the duties assigned in the school in a successful manner brings to the pupil a long training in the habits of industry, and builds into his character the feeling of personal power and self-reliance thru the discipline of accomplishment that comes from continued success; while, on the other hand, the habit of failure, or of leaving work partly done, is weakening in its tendency, and often immoral.

The spirit of the school in which the child lives has at all times a strong bearing on the inner life of the child. By "spirit of the school" we mean the general tone or atmosphere, the silent influence springing from the activities of the room and life of the teacher and pupil. The school may, thru these silent phases, be uplifting, cheering, and pure, tending to encourage children to higher aims and purposes, more refined sentiments and ideas, and love for the beautiful and true; or it may, on the other hand, seem to the pupils to be a drive or a grind—encouraging in them only that which is commonplace and distasteful.

The playground and the gymnasium should be made strong and moral influences in every system of schools. This can easily be done if the proper games are provided for the children, and their play is supervised in such a manner as to develop a spirit of fairness and generosity, and habits of co-operation and mutual trust between pupils. Many of our best systems of schools are spending large sums of money on this line of work, the one aim of which is the moral uplift of the children.

With the coming of manual-training courses into the curriculum of the common schools, we have greatly added to the efficiency of the schools along the lines of moral education. It is now admitted that the public school should provide the most salutary physical environment for the pupil, and promote his normal physical development thru appropriate training in the workshop, as well as upon the playground. In the workshop of the manual-training school we are finding one of the great factors of character-building. It appears Dr. Hailmann says:

> that the efforts of the mind to control the hand in well-directed manual work are repaid a hundred fold, not only in clearer insight into details of form and composition, of properties and relationships, of materials used and of objects turned out; but also in nobler aspirations, higher hopes, greater firmness of purpose, calmer self-reliance, and a nearer approach to an all-sided freedom.

The kindergarten's place in the curriculum of the school is agreed to by all. No department of the school emphasizes the moral side of the child's life more than this. The Froebel kindergarten furnishes the most perfect,

all-round training for the little child known to the school world. Besides its great work in developing the physical and intellectual phases of life, its force and importance in the field of morals are always admitted. The child comes under the influence of a true school, whose moral code is the highest, at an early age, before evil habits have become fixed. Here the pupil is inspired by a spirit of order; patience is cultivated, and habits of persistence are acquired; he learns to be diligent in business, and mindful of the rights of others; he is all the while gaining power to apprehend and appreciate the true, the beautiful, and the good.

The new education, with character-building as its first aim, seeks the cultivation of the appreciation of the beautiful in music, poetry, sculpture, painting, and architecture—in all art, as well as in nature. This love of the beautiful, or for the beautiful, as an abiding element in life, is, perhaps, second only to religion as a protection against the grosser forms of indulgence and sin. By means of beautiful school buildings and grounds, neat and artistically arranged schoolrooms, the study of works of art and the beauties of nature, the children become familiar with that which is elevating and ennobling in character, truth, and beauty. In Richmond the pupils and citizens have placed in the schools during the past ten years seven or eight thousand dollars' worth of pictures and sculpture. The board of education has expended over forty thousand dollars beautifying and remodeling old buildings, that they may be artistic, clean, healthy, and convenient. All this, first and foremost, for the sake of the moral life and the character of the children.

From the standpoint of the moral training of the child, as well as that of his general development, we lose a great opportunity by placing pupils of the seventh and eighth grades in buildings with the younger children. While the child is in the two upper grades of the usual grammar-school course, he usually enters the adolescent period. His training and life during this period present new and vital problems. Now, more than at any other time of life, he is susceptible to real culture. It is the waking time of life in both mind and body. This age, ranging from eleven to fifteen, is the time when the powers of self-control and self-direction make rapid growth. It is the time that opportunity should be given the child to take the initiative in many matters, and his powers of self-direction be given a chance for exercise. Particular psychological problems now begin to present themselves, which, if understood and solved, yield rich results in the character of the child. The presence of lower grades in the same building and under the same management necessitates the management of these older grades in conformity with the needs of the whole building. A similar disadvantage results when the seventh and eighth grades are made a part of the high school, for the reason that these grades have not the power of selfhood, individuality, or self-direction possessed by high-school pupils. If we believe that in a well-rounded character the seat of authority is transferred from without to within, that

a moral man obeys himself, and that each child, as he grows in moral power, should be steadily helped toward self-direction and self-mastery, we shall see the importance of the separation of pupils eleven to fifteen years of age from those younger and those older.

Ten years ago the board of education in Richmond built a central building for the use of the seventh and eighth grades. A strong corps of teachers was placed in charge, and the work was managed on the departmental plan. At present we have, as teachers in this building, five men and five women, all well-equipped for their work. The building is furnished with a gymnasium and manual-training rooms. For the past eight years the pupils have been given the opportunity to begin their high-school Latin or German in the middle of the seventh grade, and their algebra in the eighth. A school council, chosen by election has taken a large part in the management of the school, and in many other ways are the pupils asked to share in the management of various functions of the school. All outdoor plays and gymnasium work are under the supervision of a director. The teachers are free to solve the problems presented by the needs of the pupils of these grades, to the best of their knowledge. The results of the work in this central grammar school have been more than satisfactory. The pupils are happy in their work. In power of self-control and self-direction they are developed in a marked degree, and from the standpoint of strength of character, as well as general ability, they are much better equipped for the high school than they were under the room-teacher plan in the ward schools.

We may grant that any true definition of education will require the school to provide for the religious training of the child, but we are brought face to face with the fact that the American public school is a common school—common to all the people; that, owing to denominational teaching, no creed, and but few religious doctrines, are common among the people.

I believe it is a common belief in this country that religious training is essential to the development of true character. It is also true of most American children that the school is the most uplifting force that comes into their lives between the ages of six and eighteen. The best period of human life is childhood. It is the richest and largest. It has the most sympathies, the most capacity, the most pleasure, of any time between birth and old age. If the principles of Christian ethics are to take root in the life of our people, the work must, much of it, be done in our schools. The warp and woof of Christian character and faith are necessarily wrought out in the school period of life, if at all. All know that ideas cannot become the permanent possession of the world unless they enter thru the door of childhood.

Altho we think that the formal teaching of religion, or any form of sectarian teaching of religious doctrine, is impossible in the common schools of America, yet we know that the pervading spirit of the schools may be made religious. The schools are not to be considered godless nor irreligious. In many ways the highest and purest religious influences pervade

the spirit of many schools. When children are brought face to face with truth of any kind, if the subject be rightly appreciated by the teacher, there is a strong tendency to fill the heart of the boy or girl with admiration, with wonder, and with awe. This influence is, in a high sense, religious in its nature.

Reverence is vital to religion as well as to morality. Whatever quickens in children the feeling of dependence on a higher power, whatever leads them devoutly to wonder at the order, beauty, or mystery of the universe, whatever arouses in them the sentiment of worship, or fills them with admiration of true greatness, promotes reverence. Everywhere God touches man thru the earth—by means of the outward life of the star, of mountain, or storm. When Jesus told men to consider the lily, how it grows, he was telling them that they could find in unfolding life something to fill their lives with richer sacredness and power.

Briefly, we consider a few of the specific means by which the school may plant in the child's mind and heart the fundamental religious conceptions which shall arouse his aspiring religious nature and control to some extent his outward life.

In the study of nature and science the school finds a rich source for the development of fundamental religious thought. A great leader in the educational world has recently said:

> Show me a man who can teach astronomy, geology, biology, or history, without teaching religion, and I will show you a man who can paint the pictures of George Inness without being an artist, or one who can write the verses of Browning without being a poet.

And, in speaking of an old teacher of science, he said:

> That to hear him speak in inspired and trembling tones of the wonders of the human body, or of the sideral universe, without a thrill of wonder, love, and praise, was as impossible as for a musician to hear the playing of Ole Bull without some trembling of the heart.

In the study of history there is a rich field for the development of religious thought and feeling. To leave religious thought and influence out of the history of the world would leave most of its events without explanation.

In literature the true teachers have an agency that, rightly used, leads to the richest development of religious thought. The hope, the sacrifice, the heroisms and fidelities, that literature has enshrined in its most perfect art, form the subject-matter for religious inspiration to every earnest student.

In the teaching of all branches of study the school may give the pupil a consciousness of his own limitations as set over against the great world of thought and reality, and the abiding consciousness of an ever-living, ever-present God.

The school organization itself should impress the child with the sacredness of human life and the dignity of every day's duty. It should instill into the child's mind and heart the common virtues of human life, and a permanent respect for all the higher sanctities of life.

Another means of religious education in the school is music. Aside

from its great value in general culture, no other instrumentality is more useful in arousing and stimulating religious emotion and aspiration. Simple sacred music speaks to the heart a universal language, and there are few children who do not respond to its influence.

The Bible, that richest religious and ethical heritage that has come to man, should have some place in every school. Not until the spirit of unity among the churches has fully ripened can it be used in any large sense as a text-book in the American schools. Many portions will have to be excluded. But with judicious care the most beautiful portions of this book of books may have a large place in the schools of the people. It is the foundation of the world's best religious thought, and is the highest and noblest expression of the deepest ethical and religious conceptions of the race.

In the primary grades, besides the daily reading of selections from the Bible, there should be taught many of the best biographical stories of the Old Testament, and a few of the best psalms. In the grammar grades and in the high school many beautiful literary selections from the Bible may be studied in the literary classes.

Thruout the course the school should seek to develop in the minds and hearts of the children a belief in a divine being and in God as the Father and Creator of us all. It should inculcate in the mind of all a spritual conception of life, a Christian spirit, and a religious attitude of mind, and seek to arouse in all an abiding conviction of the universal brotherhood of men as children of a common father.

Yet, after all has been said, the most potent and far-reaching of all moral and religious forces at work in the school is the life of the teacher. If our schools are taught by men and women of sound ethical and spiritual lives, devoted in the most conscientious way to the work of developing in the children of the state the highest elements of worthy manhood and noble womanly character, we shall have met the most important conditions for moral and religious training in the schools. More than that, if the teachers are right, there will be no doubt as to the influence of the common schools on the future religious and moral life of our people.

THE EFFECT OF MORAL EDUCATION IN THE PUBLIC SCHOOLS UPON THE CIVIC LIFE OF THE COMMUNITY

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This theme upon which I am asked to express myself assumes that school life does affect the civic life of the community. The question is then as to the quality and quantity of that effect. I assume, by way of definition, that by the term "moral education" we understand education in morals thru the use of the truth as expressed in our commonly accepted ethics. The problem here suggested might be estimated practically by a compari-

son of the moral ideals of the school and of the home and community, together with our investigations into the continuity of the school's ideals in the later life of the pupil. The topic suggests inquiry whether the moral education of the school operates to prevent immorality in the later public and civic life of the pupil; whether also this education is responsible for any of the criminality appearing in the life of former public-school pupils, and, if so, how far it is responsible; and, further, whether there are any positive results of a favorable character coming from the ideals and the teachings of the school. In short, the question develops the problem of the extent of the responsibility of the school for civic life and morality.

In general, I think we may say that very few of the ideals upon moral questions originate in the schools. They usually start in the community and the home, and are taken up by the school, emphasized, put in didactic form in such a way as to become a part of the mental furnishing of the pupil. In a sense, then, the school represents the community. It goes farther and often makes clear and definite what is more or less indefinite and cloudy in the community. This process of clarifying thru didactic methods comes at a time when impressions are valuable and teaching endures. The best among all the ideals of the community are culled out and emphasized, so that in later years these earlier teachings and convictions remain as a permanent force in life. This is the truth to which von Humboldt gave expression when he said: "Whatever we wish to see introduced into the life of a nation must be first introduced into the schools." The relationship here suggested between the home, the school, and public morals makes the school a sort of clearing-house with reference to the current ideals in the American home. We recognize that the majority of our teachers come from the so-called middle class. The wealthy classes and the extremely poor classes furnish a very small percentage of the teaching body. The result is that thru the teachers there is carried into the school the ideals of the great body of our democracy. We are prone to regard as a decided advantage the normal schools, colleges, and universities in which these teachers are trained to represent our highest ideals in morals. The natural result is, therefore, that the teaching body of the country brings to the schoolroom, directly and indirectly, our best ideas upon civic morality. This can be affirmed without fear, notwithstanding the fact that the teachers in our schools represent a great variety of religious experience and ecclesiastical affiliations. Of necessity, therefore, our schools will differ from some homes very radically as to their ideas of morality. They may not reach the intensity, or even the level of some of our choicest homes, but beyond question will be in advance of the great majority of the American homes, and will stand forth oftentimes in contrast with the current morals of a community.

2. There are certain characteristic features of the school that bring emphasis upon what has been said. A few of these may be suggested.

Primarily, truth is the basis of all education. The schoolroom puts its emphasis here and brings allegiance to what is true. It cuts away the notion that error or falsehood or untruth in any form can have an abiding place in education. Love of the truth therefore becomes fundamental in every degree of scholarship, and increases as scholarship advances. Accordingly, honesty of method is insisted upon. Every process in the schoolroom, however unimportant, must be an honest process. Deception of any sort tends to the destruction of all real education. No teacher conscious of having deceived a pupil can ever rejoice in that deception. Sooner or later the pupil himself detects any departure from honesty in the schoolroom, and altho he may be unable to formulate the reason for it, he recognizes that it is alien and hostile. By easy gradation, therefore, the question of honor as between teacher and pupil, and eventually as between pupil and pupil, cannot be escaped. Before a definition of honor could be appreciated, the pupil recognizes the substance of it, so that we may affirm that the relation of honor is both fundamental and vital in every school. This principle applies equally to the requirements of scholarship. A teacher conscious of deficient scholarship will recognize the imperfection of his work, and in some degree that he is assuming what he does not have. That produces a fatal weakness in method to an honest mind. It puts an atmosphere of dishonesty in the schoolroom, for which but lame apology can be made. In education there are times when appeal must be made to authority. The teacher who is not able to speak with authority and accuracy cannot escape embarrassment by evasion.

Recognition of authority is essential in education. It is universal in the schoolroom. Any departure from this is a partial defeat of the process of education. The teacher is the personal representative of authority. Sooner or later this situation analyzes itself, and both teacher and pupil alike recognize that authority is inherent in the truth, and only so far as the teacher is the incarnation of truth and truthfulness is his authority final and complete. It is needless to yield to the temptation to assert that this reverence for the truth and this recognition of rightful authority are fundamental in both the moral and the civic progress of the race. Proceeding from this relation of authority, there comes to be a formal introduction of law, as a necessary part of the school organization. The conception of law, however, is not that of arbitrary authority; it is that of formulated truth which is supreme and equally binding upon all. This high but true conception of what the law of the school is, has revolutionized our ideas of school administration; it has opened the door thru which the teacher has become the inspiring presence rather than the dreaded driver. This conception of the relation of both teacher and pupil to law and rightful authority emphasizes truth, honesty, and honor, and prepares the way for a full recognition of the rights of others, and eventually to a kindly consideration. Nothing is more important in the everyday life of the school than that pupils

shall learn to recognize the rights of others and to give a just consideration to other people. This is what makes democracy possible in its best sense, and thoroly enjoyable in its realization. The beginning of these things in the public schools has laid the foundation upon which our colleges and universities have been building. The full fruit of these principles is seen in the fact that the modern high school and university are much more democratic than any school could have been two generations ago.

There are other qualities in the schoolroom worthy of mention that bring the same results. I refer to the habit of accuracy, the uncompromising attitude toward error, the insistence upon exactness, neatness, cleanliness, and a score of others familiar to every teacher in the land. These are the positive qualities that build up the pupil, construct his habits, and make the atmosphere in which he lives. The modern theory and practice of education proceed along these positive lines. We reach the negative virtues thru the inculcation of positive ones. A long protest has been heard against undue emphasis upon the negatives. We are not disposed to look with favor upon the teaching that constantly cries out "don't." The constant reiteration of prohibitions has been replaced by a larger emphasis upon the positive achievement. The schoolroom is not bringing emphasis upon vice by constantly calling attention to it thru warnings. We are disposed to magnify the importance of the truth and of virtue, and to bring the pupil to a love of what is true and what is right by an enthusiasm for the constructive processes of education. The psalmist said: "Thy word have I hid in mine heart that I might not sin against Thee." Modern education believes that a mind filled with the truth will escape the penalties of error. Positive instruction is therefore the keynote in modern education. This principle is what has given enthusiastic interest in the educational problems and in the investigation of the child. The abiding interest of scholarship is in this fundamental question at the very beginning of our educational processes.

I recognize, however, that the negative form of instruction has a corrective value and cannot be wholly neglected. This is due to the fact that the habit of error is practically universal. This habit must be corrected; but unfortunately we have not always seen the corrective power of truth itself. Too much emphasis, therefore, has sometimes been given to the negative, with apparent oversight of the importance of the positive. The well-known tendency in the average healthy boy to want to do things prohibited, or to enjoy the hidden treasures, is not only proof of an investigating mind, but better proof of a certain quality in boys that needs to be reckoned with in their education. There is danger in the excessive use of the negative. The bands of restraint may be broken suddenly and the boy plunged into the worst of excesses. The only freedom that is safe is the freedom thru the truth. Here modern education properly puts its emphasis. In doing so it has laid in the child's mind a most important principle that cannot fail to influence powerfully the subsequent life.

3. It is important now to notice that morals should not be confounded with mere external conformity. There is a tendency for the schoolroom—and for life in general, for that matter—to be satisfied with an external form as a substitute for the substance of morality. Now, morality is the result of choice. The ideal must be re-enacted by each individual; the law must be personally accepted; self-legislation must be provided; every individual in that sense must make his own law and determine his own character. The statute, "Thou shalt not steal," doubtless has the intellectual assent of the multitudes. That is a good form of sound words. It becomes vital in life only when each individual makes it the law for himself. Personal choice must therefore become a factor in every educational process that looks toward education in morals. The schoolroom cannot be satisfied with a mere exhibition of mottoes. It may not rest with the intellectual assent of the pupil to the truth. These methods and these principles must be re-enacted into the life of every pupil before education in morals makes any great progress. Just here is where we succeed or fail. The fact that a boy has been educated in a school where highest ideals were cherished, where the best precepts were taught, proves only that he was educated in a good environment. In order that he may be benefited by such an opportunity, he must be trained to make his own choice, to reach his own decisions, to enforce self-legislation, to determine his own conduct. We cannot force this upon him. We may urge it, we may argue it, but we come to the simple conclusion that we cannot force a man or boy to be moral. He becomes so only when he chooses to become so. This reveals the fundamental reason for giving a pupil and the advanced student more and more an opportunity to select his own course of study. No greater force in the development of the character of the modern university student has appeared than the responsibility put upon him of doing something. The old theory of authority in education, coupled with minute direction, left a minimum opportunity for choice on the part of the students, and in so far left the whole question of character out of consideration. At any rate, it was an education in which persons were trained into certain prescribed views, rather than an education in which persons were developed and prepared to choose freely and wisely whatever commended itself to a rational judgment. The modern view is that the child at the earliest possible moment should be given the opportunity for intelligent choosing. There should be wise direction, helpful counsel, but less of external force and more of personal choice. I am aware of the difficulty in this whole subject. The old folly was that by some means the mere passing of the years would bring the ability to choose; the newer wisdom is that the power to choose wisely is acquired by the constant exercise of the will. We are disposed, therefore, not only to educate the intellect, but to train the will and to cultivate the emotions, to bring into our educational processes an opportunity for a rational choice, and to bring to the younger pupils such opportunities as

they are capable of using. It may be urged that with younger pupils the course is entirely prescribed. It does not follow, however, that there is not a large opportunity for the exercise of choice and for the development of wisdom in making choices. This question resolves itself into the problem of individual initiative. I believe that every teacher should wisely urge upon every pupil the importance of this individual initiative. The training in the use of the initiative should be wisely directed. The wisdom of right initiative, with a proper regard for the rewards in such cases, should be constantly in view. By this method we not only gain strength, but prove the value of experience, and inculcate the most fundamental ideas in morality. It is in this field that manual training has won some of its most valuable victories, by affording an opportunity for initiative and choice. It has cultivated an appreciation of the true and the beautiful; it has developed self-reliance and put emphasis upon the qualities so important in our civic life.

Moreover, it is to be observed that in this self-legislation now emphasized we have the most fundamental principle in the determination of character. We also have a characteristic feature of modern education. The public school has thus from the very outset put appropriate emphasis upon the pupil in the matter of his choices. More than we have estimated, we are teaching self-reliance, self-direction, self-determination. The fact that the school holds up the highest ideals toward which the student's choice is directed makes it a great power in determination of character and in the fixing of moral ideals.

4. We now come naturally to the specific question as to the effect of this kind of education in the public schools upon the civic life of the community. Here I remark first of all that this principle of self-legislation is fundamental in morals and essential to the development of democracy. Self-government is the common phrase. There can be no such thing as self-government until people have been trained in decisions and choices. The public school means therefore the perpetuity of democracy. Modern education proposes a free individual capable of making decisions, of self-direction, and trained with a charitable frame of mind toward others. This kind of citizenship makes democracy possible and endurable; the lack of it would turn a democracy into an aristocracy or an autocracy. The civic life, therefore, of our community is determined largely by the character produced thru our education. It happens that our public schools are the largest and most effective organization exclusively devoted to the training of our citizenship. For this reason the school is manifestly the most potent influence in determining our civic life.

A second remark is that this influence of civic life is intensified thru the quality of our teaching. Attention has been directed to the element of choice insisted upon in our modern education, and attention is now directed to the quality of those choices. It may be agreed that all schools are not

equal in this particular, but it will also be agreed that every school is looking upward and not downward; that every school is looking toward better things, with a determination to use its power to direct pupils in their choices. No school ends its effort with the proclamation of an ideal; it seeks the approval of that ideal from the pupil and its realization in his daily life. The quality of these choices appears further when we remember the uncompromising attitude taken by the school. The school never seeks to revise an ideal because it is true but unattained. The right and the true, as against the wrong and the false, are sure of maintenance in the schoolroom. If in later years men and women come to compromise the truth, they also recognize that they do it in spite of the teaching of the school, and in response to motives never approved by the teacher.

A third remark may now be offered, to the effect that instruction in formal ethics is a small part of the work of the public schools. In the debates upon this question an undue emphasis has been put, in my judgment, upon the importance of formal instruction in morals and religion. There are times and places where such formal instruction is of the highest importance. I believe that the home and the church should recognize their opportunity in this regard. The public school, however, does its most effective work by its persistent and patient insisting, thru its ordinary exercises, upon the qualities so fundamental in civic morality. What it teaches has practically unanimous support. There can be no valid objection to the ethical atmosphere of a schoolroom in which a boy breathes a spirit of loyalty to the truth, of honorable dealing with all associates, of respect for rightful authority, of obedience to well-established law, and of proper regard for others than himself. The criticism of incompleteness that might be brought against such principles would be offset by such objection or enforcement of the particular views sanctioned only by particular classes of the people. It is well to recognize that the public school serves all the people, and serves the state most efficiently by bringing to all people the right ideals of citizenship along with the other processes of education. The most enduring effects upon our civic life will be found, not in any formal declaration of principles, or in the formal teaching upon questions of personal habits or civic morality, but in the inculcation of ideals; in the cultivation of choice, and in that normal and sane attitude of mind cherished in our best schools.

It is possible, therefore, to make a definite or complete reply to the question proposed in this topic. We cannot demonstrate it as we demonstrate a proposition in geometry; nevertheless, we are not uncertain as to the far-reaching effects of our public school upon our civic life. The most fundamental ideas in our public schools are equally important in our civic life. If these things be neglected, neither school nor civic life can be what they now are or should be. In the schoolroom more than elsewhere, as modern conditions now are, these ideals are encouraged. The school with practical uniformity and agreement brings to the millions these ideals accepted and

approved by our teachers. As things are, neither the home nor the community can present these things so persistently and so universally as the school. Manifestly, then, a great duty is laid upon the teachers and the schools of the country to be true to the interests of the pupil now, that he may be true to himself and false to none when mature years bring the opportunities of life and citizenship.

DISCUSSION

WILLIAM J. SHEARER, superintendent of schools, Elizabeth, N. J.—I cannot see in the papers any points on which any of us should differ. The most important duty of the school and the home is the fixing of right principles of duty and conduct. We all must agree, first, that acts involving moral questions are the most important acts; second, that they are the most frequent acts in school. We cannot continue to rely on the unconscious influence of the teacher for the teaching of morals. The results of this kind of teaching have not been satisfactory. The teacher must explain to the child what is right, before the child can decide to do right. Without knowledge, can there be any moral act? Is it not, then, our duty as superintendents and principals to see that the teacher gives to the child knowledge, in order that the child may choose? It was emphasized in one of the papers that the basis of the moral sentiment is a sense of obligation. Each imposes the moral law on himself. The moral law deals with motives, while the civil law deals with actions. Without raising the question whether it is right to do as Romans do when in Rome, we all agree that the standards differ in different sections. In one section it is considered right that the children should support and reverence their aged parents, and in another that they should kill them when they get old. We must find the origin of the moral sentiment in the family.

I noted that nothing was said in the papers as to the difference between the teaching of morals and what should be called moral education. The latter comes from every experience of life; the former, from the precepts of the school. If there is no sense in giving instruction in these subjects, why should there be churches or teachers?

I do not think that the papers emphasized as strongly as they should the importance of moral training, in whatever way it may be given. The definite aim in moral training may be stated as, first, the subjection of the lower feelings to the higher feelings; second, the improving of the moral judgment; third, leading the children to observe the moral law; fourth, the strengthening of the sense of moral obligation. This can be done, it seems to me, only by leading the child to will to do the right. It is conscience, it seems to me, that should be emphasized. The moral idea is primary, in every one of the languages and dialects. There is not one that does not have a word for *right*. The whole social life is rooted in conscience. The laws are not supposed to be for any but the lawless. The great majority are not influenced by fear of the law, but by the consciousness, of what is the right thing to do. Character depends more upon conscience than upon anything else. Thru the feelings we may reach the will. It is of vital importance that the course of study should suggest to the teacher work that can be done to train the conscience; to choose properly; and to strengthen the will to carry the decision of conscience into effect.

M. M. RAMER, state superintendent of public instruction, Pierre, S. Dak.—This topic is under discussion in my state in a very pronounced way. It has been said that the home and the church should create character. But the fact is that they are not doing it. A speaker at an N. E. A. meeting, not long since, said that the absence of religious teaching in the public school is the suggestion that religious training is not needed. I

believe that the public school must instill a certain religious culture, probably chiefly in the kindergarten and primary schools. At the last meeting of the State Teachers' Association in South Dakota we provided for a committee of fifteen from the educators fairly representative of the various shades of religious thought, and they are to report to us what common religious ground they can find, and then to report what they all agree should be done in the giving of religious instruction in the schools. They are also to submit a course of study in ethics on a basis of Scripture.

JAMES M. GREENWOOD, superintendent of schools, Kansas City, Mo.—We should discuss this question from the standpoint of the child, and not from the standpoint of those who have studied the philosophy of this subject. It is not worth while to talk to children about high ideals if they are not well fed at home. You should keep a child clean; soap and water are good civilizers. The child should be a good sleeper. We should develop in the child, by a process with which teachers are familiar, the habit of right feeling. Then he should get into the habit of right thinking. With this comes right acting; then the right attitude toward those near to him, and eventually toward those a little farther away. By degrees he comes to a period when we can correct him so he can govern himself. Under such instruction we can probably get a better crop of men and women than we now have. If we will work along lines of common-sense, we shall start from the platform where children are now. I have asked school children frequently what they would do with the boy who gets sulky, and they say: "Lick him!" In a colored school some of the pupils suggested that the yardstick should be taken to a sulky boy. In another school the advice given was to shake him. The children think they know what should be done to a child to lead him to choose properly. Their notions are those of quick and prompt obedience.

HENRY SABIN, Des Moines, Iowa.—I rejoice to hear Mr. Greenwood advocate the old-fashioned doctrine of compelling obedience, when compulsion is necessary. I said in the National Council once, when I had a little support, that the authority of the teacher must be enforced; I am glad to see now that the old-fashioned doctrine is approved. Can we rear a good race of men and women if we leave out all idea of responsibility, all idea of God? Our public schools never received such a blow as when some one promulgated an idea that the teaching must all be secular. I bless God, this morning, that that day has gone by. We are coming back to discover that the teaching of the doctrine of responsibility is the foundation of all moral training. This new doctrine that has been going into our schools for the last twenty-five years has not brought up a race of which we can be proud. We want to get back to the old foundations, and get back right speedily.

J. D. SIMKINS, superintendent of schools, Newark, Ohio.—I believe that we all agree that we should compel obedience when necessary, but we may make mistakes. When you compel a boy, and he obeys thru fear, you have not changed him. If you can get him to change himself, he is changed by the only one that can truly change him. You punish the boy, and he feels that he has not a friend on earth. The thing to do is really to believe that there is something good in every boy. We are not going back to the old way.

JOHN W. COOK, president of State Normal School, DeKalb, Ill.—It is a matter of satisfaction to find that we are coming to some well-defined theory. I wish to express my great obligation to President Thompson for the way in which he has cleared the atmosphere by giving us a series of propositions every one of which is clear as a bell.

S. Y. GILLAN, Milwaukee, Wis.—I desire to enter a dissent to the argument of the first paper. It has the statement that no tribe or people yet has been found destitute of religious instinct. This either proves too little or too much. We know that there are many good citizens that believe there is no need of war, and yet war has been a universal practice. There are people who believe that the vermiform appendix is unnecessary, even tho its possession is general. I am impressed with the suggestion that we should

recommend the teaching of science. Now, are not many of the greatest scientists irreligious, or at least careful not to get their science and their religion mixed? The nearest approach made here to define religion is that it consists of what is agreed upon among the sects. Now, that is so far off or so attenuated as to be reduced to naught. Why does the gentleman from South Dakota leave out the Hebrew and the agnostic? Is it for the reason of the man who, when asked why he was in the asylum, answered: "It is because we are in the minority"? I am pleased with the second paper, in its discussion of this subject without reference to religion.

JAMES L. HUGHES, inspector of schools, Toronto, Can.—I wish to say that those two papers were the best papers I ever heard at a single session of an Association meeting. I rejoice that this Association has had the pleasure of hearing such papers. I feel disposed, however, to add a word. We are not believing in all the old things. We want obedience; but I am not going to ask any boy in the world to give obedience to me alone. I am not going to ask him to obey me alone, for he stands as my partner; I am going to be partner with him in his duty of lifting every part of his being into power. This is not obedience to me, but to the law of his life. You cannot do that by merely keeping him under. When any soul becomes conscious of subordination to another soul, power is lost. Reverence for the life of the individual is what we want. I never met a boy of the slums who did not give me as much reverence as I gave him, and I give to his personality as much reverence as I give to any human being.

FRANK C. COOPER, superintendent of schools, Seattle, Wash.—I visited a night school last night where the new boys are learning something besides reading and spelling. When it was proposed to do away with this school on a certain occasion, young men who had gone thru it said it should not be done away with for lack of money for its expenses. That school is raising boys to a higher standard. Such higher standards mean growth in moral training.

WOMAN'S PART IN PUBLIC-SCHOOL EDUCATION

MRS. SARAH E. HYRE, MEMBER OF BOARD OF EDUCATION, CLEVELAND, OHIO

The thought of the day seems to be that a child shall be educated in a way that will enable him to live a worthy life; that less stress shall be placed upon the development of his intellectual powers, and more upon his qualities of character; that the school life shall be a continuation and enlargement upon the true home life, and not a training separate and apart.

In the light of these views, the question of "Woman's Part in Public-School Education" is of more than ordinary interest and deserves the thoughtful consideration of everyone who is interested in school affairs. The work that woman has done, and the success that she has obtained along humane, philanthropic, and educational lines, in the past twenty-five years, indicate that she has a sympathy and patience with children, and an understanding of them, that fit her to take an important part in public-school education.

I believe that woman has a part in public education, because she possesses certain natural qualities peculiar to her sex, that are essential elements in the rounded-up education of a boy or girl.

I shall not take your time to discuss the political or legal right of woman

to a part in public education, but desire to simply call your attention to the moral duty and inherent right of woman to live out her own individuality and up to the best talent within her. Because of this, woman finds her work where children's interests are.

It is not a trade or a business that woman has learned. It is the intuitive insight into child-life and child-nature that God Almighty has given her. Woman knows a hundred ways to reach a child. It may be thru his pride, his reason, his intellect, or his affection, or by means of her individual tact; but, whatever method is used, there is always back of it the patience and interest of woman in youth. And so wherever children are concerned, wherever their safeguards or development are involved, the woman viewpoint should have expression. It is not only in a general and abstract way that woman should enter into the public education of our youth, but in a material and practical way.

Woman has a part in public education as a student, as a teacher, as a patron, and as a member of boards of education. Love and understanding of children are natural instincts that exist in the most primitive and ignorant woman; but if we would have the larger benefits of that knowledge in our citizenship, we must educate the possessor to use it in an intelligent manner. The evolution of woman has been and is wonderful. Every year large numbers who are to be the mothers of the coming generation are filling our educational institutions. Half of our public-school population are girls, while women constitute nearly 30 per cent. of all college students.

Occasionally someone will denounce the higher education of women. Recently a woman physician said that the mental development of woman is destroying her ability to carry out her proper functions. In answer to this, let me quote Dr. J. M. Taylor, dean of Vassar College, who has made careful study of this subject:

> The bearing of the higher education of women on the health of women and their attitude toward the home is of perennial interest. It has been abundantly shown, over and over again, by the most careful investigation that the health of college women improves during the four years' college course. While that is not true in all cases, it is certainly not true in the cases of all men. Only three of 153 graduates of 1903 of Vassar did not improve in general health after entering college. The first ten years' history of Vassar shows that half the total number of graduates married, and that the proportion of children to each was from three to four. There is nothing in the college training of American women to contribute to abnormal results. A healthy mind, a natural body, and absolutely healthy and natural sentiments toward life are the general product. No work in America promises more for its future than the thorough education of its girls.

But woman's part in public-school education has its greatest manifestation, at the present time, in the large number of women teachers in the public schools. In 1880 the percentage of women teachers was 57. In 1903 it had increased to 74; and we naturally ask why this has come about. I venture one suggestion. At one time in the history of teachers the only equipment necessary was a certificate. If an applicant before a board of

examiners maintained an average of 70 per cent., he was a teacher, and nothing could prevent him if he could delude some weak board of education into giving him a school. The time is not so far distant when physical strength was of greater value to the schoolmaster than intellectual power. It was necessary for him to control and break the spirit of the biggest boy in his room, or else he had not been a success. Experience has taught us that this influence did not stimulate the pupil's respect for law and order, but destroyed it. But there came a change in the sentiment of the public; they began to wonder if there was not some other way to reach children. Here and there a slight little woman would succeed in a school where a strong man had been employed and failed. By moral suasion, by studying the boy, by giving her woman-nature full sway, she would capture the boy's heart, perhaps touch his pride, secure his co-operation, stimulate his gallantry—in a word, win him. Educators and the thinking public at last realized that woman's way was the best way of reaching children.

At this period moral suasion supplanted the birch whip. The sentiment of the public became so strong against physical punishment that laws prohibiting it were placed upon the statute-books of a number of states. The teacher, in preparing for his calling today, does not have to measure his professional value by his ability to administer corporal punishment. The teacher of the present, who makes a success of his work, loves it. He studies and trusts his pupils, and by that very faith wins their love and confidence. He has an understanding of and sympathy with child-life, and he has tact to manage it.

The teacher must also have the ability to discriminate. The doctor, as he goes about his practice, cannot send out a general prescription to apply to all cases; he must have the skill to discriminate. The commercial man who is a successful one must study his men; he must approach them in as many different ways as there are minds; he cannot commit a speech and repeat it to every business man he may approach; he must have the acuteness to discriminate. The nurse who goes into a sickroom fully determined to put into effect the theories she has learned, without considering whether the case is one of typhoid fever or a critical operation, will soon find out that she has mistaken her calling; she, too, must have the quality of discrimination. The teacher is no exception to the general rule. He must surpass the others in tact; he must have the ability to find out each child's individual make-up and temperament; he must discover the avenue thru which he may influence him; he must reach down and interest the child-mind; he can lift it up to his own mentality only as he leads it on, year after year. This requires a comprehension of childhood; and woman's nature fits her peculiarly to enter into a sympathetic relationship with children and to teach them properly.

But the business man complains of lack of confidence and individuality in our city-taught boys. Educators themselves are somewhat disturbed

over the apparent shortcomings. Some of them give as a reason that there are too many women teachers in the city schools, and that boys, as they enter the adolescent age, need, in greater degree, masculine influences. I believe this is true; but that does not prove anything, because the average boy at that age is in the high-school work and comes under the direct influence of both men and women. In substantiation of this it is a fact, interesting to note, that out of a canvass of the 60 grammar buildings in Cleveland, the average age of the graduating classes of 1905, or 3,222 grammar pupils, was found to be 14.03 years. There was only one building where the average age of the class was 15 years. In 23 buildings the average age was 13+, and in the other 36 buildings the class age average was 14+.

It is in the cities that there is complaint of a lack of individuality among pupils; but I believe this is not because there are so many women teachers, but on account of the close organization and the lack of freedom for each teacher to work out his own problems. Technical training is the foundation of a teacher's work, but it depends upon his individual interpretation and application of that training whether or not he shall succeed. I believe that it is the teacher, irrespective of sex, who goes on, year after year, surrounded by limitations and restrictions, that makes him little more than a machine to grind out so much work per day, that fails to create individuality in pupils or instill into boys any vigorous manhood.

But it is not only as a student and teacher that woman has a part in public education, but as a patron also. We cannot get far in advance of the people in any movement; and so, if we would secure the best equipment for our public schools and the greatest benefits for the youth who attend them, we must keep the patrons alive to their needs.

It is the duty and mission of the school to develop a child, but the greatest work lies in bringing him into harmony with the community interests in which he lives; and I believe this can be done by correlating the work of the home and the school. No teacher can do this, however, unless she has the cordial interest and support of the parent. It is to be regretted that so few fathers have an opportunity to familiarize themselves with the daily working conditions of the schoolroom. The average father is absent from home during the hours that the school is in session; he is usually so engrossed in the efforts of securing ways and means that the work of straightening out the "tangles" falls to the mother. This fact brings her into close touch with the teacher and the schools, and makes the mother a factor as a patron.

Realizing the benefits, to their children, to be derived from this contact of mother and teacher, "mothers' clubs" exist in almost every school district in many cities. These clubs study and discuss many questions pertaining to children, and co-operate with and support the teachers in carrying out their plans for better and broader results.

In our own city of Cleveland the women are thoroly alive to the interests of the schools. Besides mothers' clubs, there are other organizations of

women that contribute to their welfare. The Needle Work Guild, thru information obtained from the principals of some of the poor districts, each fall furnishes a change of underwear, stockings, and other necessaries to needy children, so that they may come to school in a presentable and cleanly manner. The Denison Patrons' League is an organization composed of the patrons of the school. Its officers are the leading citizens of the community. The league furnishes four free entertainments or lectures each year in the auditorium of the school building to the parents of the district, at which are discussed the relationship of the home and the school. The Free Day Nursery and Kindergarten Association supports four summer vacation schools, and by their interest and effort stimulate the carrying-out and enlargement of the work. The Daughters of the American Revolution appropriated a sum of money the past winter and gave, in conjunction with the school authorities, a series of patriotic lectures in the school auditoriums, where the population was largely foreign. The title of the series was "The Story of America." It was given in simple English, and supplemented with stereoptican slides and patriotic music. This work was a grand success from every standpoint. These are only a part of the numerous efforts of Cleveland women in the interest of good schools. Other cities are working along similar lines, and it will only be a matter of time when the work of woman as a patron will be considered an essential part of every successful school.

But it is equally important that woman should have representation in the administrative department of our public schools as in the educational. Far be it from me to say that all women are fitted for school-board members, or that a woman should be upon every board for the sake of having a woman. But I do believe that the right woman should be upon every board, whether in a large or small system, because broader results will be obtained by adding the woman view-point of school administration; because the right woman, when it comes to children, is unselfish and has no interests which supersede those of the child; because the interest of the teacher and patron can always have expression with a woman representative upon the administrative board.

Two of the distinctive features that mark the services of women upon school boards are their close attention to detail and their willingness to hear the patron's side of the question. The public schools are the closest to the people of all public institutions; and thru the members of its school board only can the people have representation. I therefore consider this public service and close attention to detail splendid qualifications for any member of a school board, and especial qualifications for women. The public has poor service from a member of a public board who, willing to sacrifice himself for the dear public before election, after election places himself upon a pedestal and draws the "awful circle" about himself so that no one can approach him. Women members are interested in the questions of hygiene and sanitation, and especially in those questions of education which carry with them moral influences which go to make better boys and

girls. The married women serving on school boards, as far as I have been able to learn, are women who have had years of contact with children. The one experience which makes a mother valuable is that she has gone thru that period of rearing her children, studying their natures, sympathizing with their weaknesses, and realizing their worth. By this time what she knows about children is not "theory," but experience; and if she is an educated, broad-minded woman, she can do much good in addition to being a fond mother and grandmother. The unmarried women who have been upon school boards are those who have dealt with children in a large way, and on account of that experience are quite as valuable.

In order that I might not discuss this part of my subject from a theoretical standpoint, I have written to prominent citizens in several cities where women are serving upon boards of education, and asked for opinions in reference to the value of their services. The answers received show not only that these women are acceptable members of their respective boards, but that they are rendering special, and almost invaluable, service to the schools because they are women. I give a few extracts:

In speaking of the woman who is a member of the board of education, the commissioner of schools at Rochester, N. Y., says:

> She has made a constant contribution of suggestions and intelligent discussion equal to that of any other member; she has done more visiting than all the other members together. She has interested herself in the music, decoration, and sanitation of the schools, and has brought to these subjects an experience, good taste, and special knowledge which are quite exceptional. She has been greatly interested in all that concerns the teacher, and by her remarkable gift as a public speaker she has been a force in the discussion of school questions at meetings of parents—a work of education of public sentiment which has made the progress of our schools possible through steadfast popular support. I doubt if her knowledge in the matter of selecting supplementary reading for children is surpassed by that of any other woman in the country.

Another writes as follows:

> Of the two women members at Warren, Ohio, one has been for a number of years at the head of the building committee, with excellent results, and the other has been chairman of the teachers' and text-book committee. The first work they did was to renovate the schoolrooms. At the end of the first year that these women were on the board the city board of health, in making its report to the state, spoke of the splendid sanitary condition of the school houses and gave the women of the board the credit.

The member at Grand Rapids, Mich. is serving her tenth year upon the board. In these years she agitated for manual training until it was established in the grammar grades. She has been chairman of summer-school work, and it is considered a success from every standpoint. She was a teacher, is a mother of children now in school, and is thoroly in sympathy with the work of keeping the patron interested in the school. She is independent in her thought and action, and I should say, from the splendid commendation of her I have received, that the public of Grand Rapids feel that she is one of the most valuable members of the board.

Toledo, Ohio, boasts for the first time of a woman upon its board, and the following are extracts concerning her work:

She has brought about a better feeling between teacher and parent by giving one afternoon a week to hear the patron's side of the question. She is more earnest and conscientious than most of the members of the board, inasmuch as she has "no ax to grind." She is conscientious and independent in her action, as has been demonstrated in several instances, but always yields gracefully when defeated. She is doing fine work, and has the admiration of the board and community for her splendid poise and tact.

Cleveland has had a woman on the school board for ten years. The first one found the board renting rooms over saloons to relieve the overcrowded condition of the public schools. She protested; they insisted. She threatened to call to her aid the public press; and never since then has such a thing been proposed. These women advocated and advanced the departments of kindergarten, manual training, and domestic science, and were the ardent supporters of the present-day Deaf School. They also did much toward abolishing the use of basement rooms.

The member who served upon the board from 1901 to 1903 was a successful business woman, having large business interests of her own. These women, who were upon the Cleveland board from 1894 to 1904, were women of education and had had an experience with children, either as mothers or as teachers. They were conscientious and enthusiastic, and always for whatever seemed to be for the best interests of the children. So efficiently have these women served the public that I believe it to be the fixed policy of the people of my own city to keep at least one woman on the board of education.

This question of woman's part in public education is no longer unsettled. It has been demonstrated in many cities that she has a part in the administrative department as well as in the educational. It is only a matter of time when every community will realize its importance, and when every superintendent will urge that he be given this aid. When this time comes, one woman — the right woman — will be a member of every board of education, whether in a large or small city.

In a little drawer in my desk is a daguerreotype picture of a woman. It is an old picture, taken perhaps in the forties. The shawl that covers the shoulders of the subject is an old-style Paisley and the bonnet would be an heirloom today. The hair—jet-black—is parted in the middle and is carefully smoothed upon the forehead. It is a plain face, but to me beautiful—beautiful to me because it is the face of my mother. As I sit and look at that picture it recalls to me the influence that has come down the years and molded my life. But the devotion, the patience, the sacrifice, that shine forth from the face of that daguerreotype picture are as old as woman herself. It is this spirit of love and unselfishness that is needed everywhere today. It should permeate our commercial and business life, and should enter into the public education of every child, to the end that he may become a better citizen and a more lovable neighbor.

When this moral element shall become a permanent influence in our public schools, health will supersede discipline; the heart will lead the will; knowledge for knowledge' sake will give place to knowledge of life and its human relations; and industrial and political strife will be gradually eliminated by the brotherhood of man. For, after all, what is the purpose of education? Is this life a wager to see how much information can be accumulated and stored in the human brain; or, rather, is it a grand privilege to study and understand our relations to God, to nature, and to our fellowman? To set a lower or a narrower standard for the public schools of our country is to deprive our youth of the best elements of good citizenship and to lessen their opportunities for a higher life.

WHAT KIND OF EDUCATION IS BEST SUITED TO BOYS?

REUBEN POST HALLECK, PRINCIPAL OF BOYS' HIGH SCHOOL, LOUISVILLE, KY.

I hope to see an end to debates on the question whether one sex is superior to the other. One might as well debate whether the existence of the lungs or of the heart is the more necessary to life. We do, however, feel that our mothers differ from our fathers, not as two individuals of the same sex, but that there are striking intellectual and emotional differences. We feel glad instead of sorry that our mothers differ from our fathers; but if anyone dared raise the question of the inferiority of our mothers, the first impulse of American manhood would be to answer that question with a blow, and the more our mothers differ from our fathers, the harder would probably be that blow.

Some have said that there can be no more "male" or "female" education than "male" or "female" literature. Ask any intelligent librarian, who selects reading for adolescents, if he does not recognize differences of sex in making up his reading-lists, and if he might not call books on big-game hunting and adventure "male" literature. Some objectors frankly grant that there is a difference, but they say: "Educate both in precisely the same way, and you will find that they will assimilate only what their different natures and instincts prompt, just as two vegetables growing side by side will absorb only the elements which each needs." Would any agriculturist claim that it would be wise to give different vegetables exactly the same fertilizer? Could he not rightly claim that one might need more potash, the other more ammonia? Suppose ammonia was used on potatoes, and they absorbed no more of it than their nature permitted, would there be as many and as large potatoes as if the necessary potash had been provided? Might not also a certain amount of the ammonia be wasted?

If the two sexes differ emotionally, intellectually, and physically, it can hardly be unwise or unscientific for education to recognize whatever differences exist. Boys will never receive the best education, so long as they

are taught chiefly by the opposite sex. The majority of the members of the Moseley English Educational Commission, who inspected American schools, said there was occasion to view with alarm the growing preponderance of women teachers. Professor Henry E. Armstrong, F.R.S., says in their report:

> To put the matter in very simple terms, it seemed to me on the occasion of my former visit—and the impression was confirmed during my recent visit—that the boy in America is not brought up to punch another boy's head, or to stand having his own punched, in a healthy and proper manner; that there is a strange and indefinable feminine air coming over the men; a tendency toward a common—if I may so call it, a sexless—mode of thought.

Some of the members of this commission said there was a marked contradiction in the liberality of Americans in erecting and equipping magnificent school buildings, and their parsimony in refusing to pay good men teachers enough to instruct their children. Some say that it is better to employ first-rate women than third-rate men. The only possible answer to that reply is that it is better to employ first-rate men as well as first-rate women and to pay a first-rate price for all who train American manhood. Our people are slower in educational reform than in getting improved machinery, but when we once do realize the importance of the highest type of men teachers, the money will be forthcoming. One boy, as a result of better teaching, may, thru his inventiveness and superior grasp of a business, give employment to thousands of people and make the money spent for high-grade masculine teachers the best possible investment for the commonwealth. Of course, it goes without saying that we should have just as many women teachers, and of an equally high grade. At present there is not much but the missionary spirit that will impel our best young men to become and remain secondary teachers. There are now many such missionaries among our high-school instructors, but many years' experience leads me to express the opinion that only third-rate men, if influenced by strictly utilitarian inducements, can afford to remain teachers in the overwhelming majority of our high schools.

In the name of the boy, I protest against the tendency to discourage honest rivalry in the school. I doubt whether too much rivalry is necessary or desirable for girls. This question, however, is one for women and evolution to answer. With men, life is a contest; and fortunately most boys love a contest. Those who do not must drop to the rear in the struggle for existence. That tremendous struggle, which results in the survival of the fittest, and the consequent improvement of plant and animal and thought-product, must continue if life is to progress. It is not the true masculine spirit which says: "Never have honors in a school. Never pit two individuals or sides against each other. Never inquire whether John can do better work than William, but only whether John's present record shows any improvement over his past." If a school for boys is to be conducted on this basis, it will

believe that the public school must instill a certain religious culture, probably chiefly in the kindergarten and primary schools. At the last meeting of the State Teachers' Association in South Dakota we provided for a committee of fifteen from the educators fairly representative of the various shades of religious thought, and they are to report to us what common religious ground they can find, and then to report what they all agree should be done in the giving of religious instruction in the schools. They are also to submit a course of study in ethics on a basis of Scripture.

JAMES M. GREENWOOD, superintendent of schools, Kansas City, Mo.—We should discuss this question from the standpoint of the child, and not from the standpoint of those who have studied the philosophy of this subject. It is not worth while to talk to children about high ideals if they are not well fed at home. You should keep a child clean; soap and water are good civilizers. The child should be a good sleeper. We should develop in the child, by a process with which teachers are familiar, the habit of right feeling. Then he should get into the habit of right thinking. With this comes right acting; then the right attitude toward those near to him, and eventually toward those a little farther away. By degrees he comes to a period when we can correct him so he can govern himself. Under such instruction we can probably get a better crop of men and women than we now have. If we will work along lines of common-sense, we shall start from the platform where children are now. I have asked school children frequently what they would do with the boy who gets sulky, and they say: "Lick him!" In a colored school some of the pupils suggested that the yardstick should be taken to a sulky boy. In another school the advice given was to shake him. The children think they know what should be done to a child to lead him to choose properly. Their notions are those of quick and prompt obedience.

HENRY SABIN, Des Moines, Iowa.—I rejoice to hear Mr. Greenwood advocate the old-fashioned doctrine of compelling obedience, when compulsion is necessary. I said in the National Council once, when I had a little support, that the authority of the teacher must be enforced; I am glad to see now that the old-fashioned doctrine is approved. Can we rear a good race of men and women if we leave out all idea of responsibility, all idea of God? Our public schools never received such a blow as when some one promulgated an idea that the teaching must all be secular. I bless God, this morning, that that day has gone by. We are coming back to discover that the teaching of the doctrine of responsibility is the foundation of all moral training. This new doctrine that has been going into our schools for the last twenty-five years has not brought up a race of which we can be proud. We want to get back to the old foundations, and get back right speedily.

J. D. SIMKINS, superintendent of schools, Newark, Ohio.—I believe that we all agree that we should compel obedience when necessary, but we may make mistakes. When you compel a boy, and he obeys thru fear, you have not changed him. If you can get him to change himself, he is changed by the only one that can truly change him. You punish the boy, and he feels that he has not a friend on earth. The thing to do is really to believe that there is something good in every boy. We are not going back to the old way.

JOHN W. COOK, president of State Normal School, DeKalb, Ill.—It is a matter of satisfaction to find that we are coming to some well-defined theory. I wish to express my great obligation to President Thompson for the way in which he has cleared the atmosphere by giving us a series of propositions every one of which is clear as a bell.

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I believe that woman has a part in public education, because she possesses certain natural qualities peculiar to her sex, that are essential elements in the rounded-up education of a boy or girl.

I shall not take your time to discuss the political or legal right of woman

We must not today lose the services of these animals as teachers in any case where they can be retained. The trolley is making suburban and country life easier, and it will give us back some of our lost teachers. It would be a partial education for every boy to own at least one domestic animal, and to care for it entirely, at first under proper supervision. I remember when as a young boy I learned one of the greatest lessons of my life. I found one of my own little chickens beaten down by a hard rainstorm and feebly gasping for breath. I took that chick in my hands, ran with him to the house, wrapped him in flannel, and laid him by the hearth-fire. In about half an hour, which seemed an age to me, I heard the little fellow say, "Peep, peep." I gave him some warm food, and as the helpless fellow nestled against my hand, I realized that I had saved him, and I felt the absolute luxury of protecting the weak. I doubt if any man who suddenly made a million dollars ever felt the thrill of a keener pleasure than I then knew. Today I thank every domestic animal that taught me in my boyhood days—every chick, kitten, dog, calf, or colt, that needed my care and protection, that shared my companionship, and that gave me glimpses of that ineffable beatitude which has come to me only when I have protected the weak and helped to raise the fallen.

To guard against a purely pedagogical treatment of the education of boys, I recently wrote a large number of letters to business men in various parts of the United States, asking what education should be given to the rank and file of boys, preparatory to successful business of any kind. The replies laid the most emphasis on the ability to write, speak, and spell the English language correctly. One large corporation said:

> We notice that slovenly penmen are usually lacking in system, accuracy, and careful methods generally. . . . . Public speaking and debating ought to be a prominent part of the course in every high school for boys.

Arithmetic was next stressed. A Louisville corporation informed me that a graduate of my school was refused an excellent place because he did not make well-formed, legible figures. Geography, manual training, and history were declared important subjects. Some manufacturers said that every boy who expected to be promoted should also know something of physics and chemistry, Another insisted on adding geometry, which he said should come before algebra. The majority emphasized the importance of the high-school course. "It enables boys to grasp more quickly the problems which confront them." The following expression of opinion would represent not unfairly the attitude of the leading men of affairs thruout the United States:

> The more education a boy gets, the more apt is he to discover short-cuts and avenues of saving that an ordinary mind simply will not address itself to.

The most interesting feature of these replies was the emphatic expression of opinion by certain great business corporations that culture studies are of vast importance for boys. This changing opinion deserves attention at

the beginning of the twentieth century. I wrote the Baldwin Locomotive Works, a corporation which has about 20,000 employees, to learn its position in regard to culture studies, and I received the following reply under date of January 17, 1906:

> Our ideas in general are that, no matter what may be his subsequent career, it is important for a boy to qualify himself with the broadest and most thorough education possible within the time at his command. The more thorough his mental discipline, the more complete his knowledge of mathematics, the classics, natural philosophy, and other general branches, the better is the foundation on which to build the special knowledge requisite for the specific field which he may decide to enter.

It is in accordance with this view that we do not recommend manual training as an education for a boy intending to choose mechanical pursuits for his life-work. We feel that the time which manual training takes from study of the broad foundation branches above mentioned cannot, except at greater labor and cost, be regained later in life. When he enters the mechanical pursuit, his whole mind is concentrated upon it, and he can then achieve in a few weeks or a few months progress that which is more practical and more valuable than the smattering of mechanical knowledge obtained in a training school.

> Following the same principle, we should perhaps take a directly contrary view, were the boy to adopt a career outside of mechanics, because then the mechanical training would tend to broaden his faculties and increase his powers of observation, constituting a form of education not likely to be obtained during his later career.

For one of the greatest of the so-called soulless corporations of the world to insist on the value of culture studies for its ordinary apprentices marks, let us hope, the beginning of a new epoch. Let us remember that we shall have to search longer than Diogenes to find a middle-aged man who will bless the parent, teacher, or school official who, by argument or otherwise, deprived him of the chance of taking culture studies and of receiving enjoyment therefrom. Certainly those who have experienced the quality of enjoyment that can come only from culture would be the last to exchange it for a few more dollars and cents. If by a study of astronomy the boy can get more pleasure from looking at the heavens, then let him study astronomy. Even the average workman does not limit his purchases to what is strictly practical. He demands wall-paper and pictures for his home.

All that we can give boys advantageously is such general training in the foundation subjects, such power of initiative, such general culture and moral development, that they can face and solve the most varied problems. A boy almost always finds that his arithmetic never quite fits the special business that he enters. Wholesale dealers wrote letters to me complaining that boys do not at first quickly know "the equivalent in units of 3/144 of a gross, 5/12 of a dozen, 3/20 of a thousand," and that they are puzzled "in figuring discounts based on percentages." Business men have no right to expect that boys will come to them adepts in such special lines of figuring, but they may justly demand that the boys shall have had sufficient mental

training to learn how to do quickly what is required. A young tanner, who took chemistry in college, told me that he wished he had studied a different kind of chemistry for his business. Most of us have made the discovery that college did not fit us exactly for anything. I think school and college did a large part of their duty if they enabled us to fit ourselves. We are at last slowly learning the truth that special mastery in any business must come largely thru one's own moral and intellectual power to acquire the needed knowledge in connection with experience. Josh Billings was correct in saying: "Success don't consist in never makin' blunders, but in never makin' the same one twict."

We could so train a boy that he would be as accurate as an almanac along given lines, but he would soon be a last year's almanac. Our national census shows that large numbers are forced to change their occupation. Business men say that you cannot run a business today as it was conducted five years ago. I think that men of affairs will gradually agree with the opinion that education should not early in life cut too deep and unalterable a channel for the stream of thought and action, but should enrich and increase the volume of the stream, leaving the exigency of business life to direct the course.

Foreigners say that of Americans of the generation now passing, those brought up on the farm, have led the world in three respects—in the power of initiative, in the habit of relying on themselves, and in will-power. I believe that a decline in the initiative and self-reliance of our boys has already set in, and that it is the duty of every superintendent and principal to ask: "How can my school be so conducted as to increase the spirit of initiative and self-reliance?" I believe that every one of our schools can be improved in this respect.

My experience with the boys of my own school leads me to believe that under present conditions the open-air playground is one of the very best agents to develop initiative, self-reliance, and the social side which makes these qualities valuable. My boys thru their own exertions secured an entire square of land four blocks from their school in the heart of the city. They fenced this in, laid out a running-track, tennis courts, baseball diamond, and football gridiron, and also built a clubhouse. Almost everything connected with this park seems to develop self-reliance and social qualities as well as initiative. Since the decline of agriculture and of Elizabethan variety in England, the English have relied largely on their playgrounds to keep the peculiarly Anglo-Saxon qualities from atrophying. Wellington said that he won Waterloo on the playgrounds at Eton. A member of the Moseley Commission expresses surprise that the Americans "are not yet alive to the excellent opportunities for work which the playing fields afford," and he adds that no amount of physical training under cover can "ever be a satisfactory substitute for free spontaneous play."

I have heard educators wrangle by the hour over the question whether

knowledge of one subject confers any power to deal with subjects outside of its immediate domain. There is one kind of training, however, which fits every business of life equally well. Moral power can be used to attack any of the duties of life, no matter how dissimilar. The United States senator, the life-insurance president, and the plumber alike need moral training; but this is precisely the training which lags farthest behind. Intellectual culture has substituted more refined and intricate ways of wrong-doing for the clumsy, repellent methods of a thousand years ago. Robbers once held the feet of their victim to the fire to make him give up his property. Now we have the intellectual adroitness necessary to plan stock reorganizations, to juggle expense accounts, and to bribe commonwealths. Great corporations have said, in reply to my questions, that they are now more than ever before demanding that everyone who is placed in line for promotion shall have character and moral backbone. If they temporarily waive this requirement, they say that experience has taught them that they are providing future trouble for themselves.

Boys will show the most rapid moral improvement only under the inspiring influence of the best teachers, who keep them marching forward to the music of noble ideals, until that way of marching has become a habit, and a change would cause, not only inconvenience, but positive suffering. To his dying day, George Washington said: "The mystery of my life is how Benedict Arnold, American born and bred, could have become a traitor." Let us educators stress the moral side of our work, until we can say: "Our boys may go wrong, but we have trained them so that the first start in that direction will be as unnatural as the love of death."

WHAT KIND OF EDUCATION IS BEST SUITED FOR GIRLS?

MISS ANNA J. HAMILTON, PRINCIPAL OF SEMPLE COLLEGIATE SCHOOL, LOUISVILLE, KY.

The answer to the question, "What kind of education is best suited for girls?" cannot be the same in detail for two successive generations; yet the work of each generation is a movement toward the fulfillment of a higher civilization.

Each age carries its own demands, and in order to live successfully the life of the day in which one finds one's self, it is necessary to rise to these demands. Conditions of life for women have changed so rapidly that it has been a difficult task to keep pace with these conditions in the preparation for life. So long as woman was held as a slave, valued for her labor or for pleasure, all the education she needed was such as rendered her a strong and healthy animal, capable of manual labor, or such as fitted her to become a graceful and fascinating plaything.

When she took her rightful place as wife and mother, her valuation was

much the same as in the earlier period, according to her physical fitness for these duties, different races having slightly varying ideas of fitness. Whatever these ideas, however, it behooved the relatives of the girl to see to it that she answered the requirements. This was her education, for it was her preparation for life.

With advancing civilization, woman rose to an honored place in the family life. She became the genius of the home, the guide and teacher of her children, the true helpmeet of her husband. Still her life was comparatively simple. She was supposed to know by instinct how to meet these obligations. Given a certain amount of natural intelligence, mixed with womanly sweetness and devotion, and it was expected that time and experience would enable her to discharge successively all duties devolving upon her. Except as a mother trained and prepared her daughter, there was nothing that could be called education. All that the schools gave was a much-diluted compound of the matter given to her brothers, plus a little music, a little painting, and a little needlework—these last acquired by special study with special teachers.

In the present day life is so complex, the demands upon women have become so varied, that we certainly cannot, with any show of justice or reason, suppose that natural instinct is sufficient to prepare her for her place in life. We expect that she shall retain the same power and sway in her own particular field, with the added charm of a deeper intellectual and spiritual development. We expect that she shall be the same loving and devoted and self-sacrificing wife and mother, and fulfill these obligations more intelligently than did our grandmothers. In addition, her own intellectual development brings to her a realization that she is not merely a woman, but an economic factor in the onward movement and development of the race.

To the ordinary duties, then, of wife and mother and housekeeper, she must add those into which the exigencies of the times are pushing her—namely, the duties of the wage-earner in the industrial and commercial world, and the coming duties of citizenship, a few of which she has already undertaken. Here, then, is the call for an adjustment to a different and broader life, tho still within the realm of the feminine and womanly.

Should we, as educators, fall in with this tendency, which turns the girl away from home and toward the outer world; or should we combat or counteract this influence by making possible and desirable for her the more distinctly feminine rôle; or should we, instead, recognize the age itself and its need for the girl of today, and lend every effort to assist her in adapting herself to it?

According to economic values, our answer lies in this last thought—that girl is best educated who is best able to meet along all lines the demands of the age and country in which she lives.

America grew from a certain value, just as did the girl. It has passed

thru its struggle for freedom, into a nation-building era, thru this into a period of literary culture, and then into the stronger, wide-awake, industrial-commercial era of the present time, which is not only bringing it enormous wealth, but is making it recognized as a great factor with its neighbor-nations. But, like the girl, it has yet another step to take. Some of this vast wealth must be used for culture. It must have a general culture before it can be called great, and this greatness can be reached only thru the individual members of its commonwealths. So that, with all it has accomplished in the buoyant temperament and aspiration of its youth, it must turn its ambitions beyond the political and industrial record of which it may well be proud, and bend every energy to the culture period it must attain before it can claim the highest admiration of the nations of the world.

This is the age, then, in which we must place our young womanhood—a womanhood that draws its spirit from the same conditions as its country; one that feels that it has the ability to train for the higher intellectual life, for the industries and arts which will develop its powers and equip it more thoroly for the duties of modern life. It is a womanhood that wishes to hold itself independent, so that it may preserve itself as sacred for the purpose for which it was created, the right to hold itself as did Portia—"queen o'er herself." Further, it is not a womanhood that offers competition to man, but one that would assist man; one that asks of man his better manhood, and a gentler courtesy that shall be instinct with the feeling that woman is a peer, a comrade, a friend, a fellow-worker, a fellow-citizen; and with the recognition that each is the complement of the other, working together to fulfill the destiny of life. Such, then, is the spirit of the modern girl, and such is the spirit of the time; and such must be the understanding of those who have charge of the girl in the school of the present and the future.

This brings us to the question: How is the school of today prepared to carry its obligation to the time and the training of the girl in such manner as will fit her for the age?

The school has had its own life to live, and has had also its stages of growth. From the log school of our earlier pioneer days to our graded school of the present, our high schools, colleges and universities, our normal schools, show something of the progress of its onward stride. In the establishment of international chairs in the United States, France, Germany, and Italy the school may be said to be entering upon its period of culture, tho it has not yet fully adjusted itself to the rapid march of society. The reason has been that it has been handicapped by this very society, by lack of revenue, by its governing boards, and sometimes even by its superintendents, its principals, and its teachers; and it has often been its own worst enemy in thrusting its internal troubles from one department of its own system to another, hoping thus to economize in point of time. In addition, it has been made the burden-bearer of the home, and to some extent it must carry part of the problems of the church, because of its better opportunity

for contact with the child in point of time and influence. In spite of this, it has waxed stronger and stronger with the years, and has filled a notable part in the life of the nation. It has until recent years carried the one-type school—the academic—one that confined its education entirely to the head. Then came the time calling for an education of the hand as well, and recognition was given to the extent of establishing commercial and manual schools.

Now public opinion is trying to awaken school authorities to the fact that their powers and their school funds are not being used to the best advantage economically, and that our schools are not adjusting their work closely enough to the trend of the time, and that there is a further need of school division along the technical lines, and of a reshaping to meet the culture problems which society is bringing to the door of the school for solution.

In a closer study of the school, we find evidences on every hand that educators are coming to a realization that there must be a differentiation at some point in the training given to boys and to girls. The question, however, as to the point at which the differentiation should begin, and to what extent it should be carried, will depend upon the results of the investigations, observations, and experiments that are already being inaugurated by our educational scientists. In the meantime, however, the girl will continue to meet the one standard in existence, and will take whatever she may need to satisfy her present desires.

Woman has demonstrated her ability to take the standard of education provided for the masculine mind, to complete with credit to herself the most exacting university course. But, having done this, has she developed in herself what was highest and best? Is there not another self which cries out for stimulus and direction? Let the girl take as much of the intellectual life as she will and as she is fitted for, but she yet needs some quarter of a century's training along lines that are essentially her own.

The characteristic faults and weaknesses of girls are the results of woman's history, and that education which does not plan for the character-building of our girls leaves out the keystone to the structure. If girls are disposed more than boys to win their ends by artifices, it is because in the past that was the only means at their command; if they are deceitful, it is because deceit in the past was their only weapon of defense; if they are vain, it is because man's homage put the highest premium upon physical beauty; if they are too emotional, it is because in the past the woman who wept oceans of tears over her small woes and fell into a swoon on the slightest pretext was the type of heroine most admired. These faults have been eliminated, to a great extent, by the slow process of evolution, but we can hasten the end by encouraging ideas of straightforwardness, honesty, self-forgetfulness, and courage, and, further, by building up ideals of strength and beauty as found in the examples of feminine characters of the world who have stood for the height of glorious womanhood.

An interesting study which Earl Barnes has made with regard to the ideals of a large number of girls and boys shows a great dearth of womanly ideals. Out of a group of Boston girls, when asked whom they would like to resemble when women, 68 per cent. chose male ideals for emulation. Hardly a woman in public life was mentioned, except Clara Barton and Helen Gould. The reason for this is plainly to be seen. Our histories are full of the exploits of men characters which arouse admiration and a desire for emulation, and are lacking in the record of the lives of noble and courageous women. We should endeavor in every way possible to supply this lack. Prowess shown in war and conquest has appealed to our writers of history so much more than the less ostentatious part which noble and self-sacrificing women have played, that the lime-light has been thrown almost entirely upon the dramatic figure of the male hero.

Through literature we can do much to build up the right ideals, and in the study of the great heroines of fiction we may beget in future years the heroines of real life. Classified courses in morals and ethics for our elementary and secondary schools would do much to raise the quality of the feminine mind.

That this mind may be able to do its best and most vigorous work, it must have a body trained likewise. The pressure of our rushing nervous life makes it more necessary than ever before that the girl should have every possible aid toward building up a strong body. Women naturally husband and conserve their strength more than men, yet they do not systematize as do men. We can raise the average health of the race only by raising the health of the individual, and particularly that of the prospective mothers. The schools can do much to encourage and provide conditions for healthful activities in the way of play and manual exercise, as well as providing definite instruction in physical culture. This is being done in many of our schools, but it should be more generally and systematically done, as our indoor life today makes our strength dependent upon artificial means. Ample gymnasiums and competent instructors should find a place in every school.

The opportunity for out-of-door life ceases for thousands of girls at twelve or fourteen years. Let them have as much air and happy outdoor activity as possible in the grades. Much of this can be done in school gardens, in park and field excursions, and public playgrounds. The energy thus accumulated will do much to develop resistive power when their lines of life fall in shop or factory; and it will do much also to develop a clean, wholesome, sane emotional nature, which is even more important.

The instruction, now being given in many places, in hygiene, diet, and food values is a step in the right direction, and must in a generation have an appreciable effect upon the tone of health of the masses.

By training along domestic lines in all the phases of cooking, sewing, and housekeeping, might we not somewhat check the tendency toward shop and factory by giving the girl a sense of power and capability in the home

arts? We love to do the things we feel ourselves capable of doing. Might not the girl follow the line of least resistance and take up more easily the distinctly feminine rôle? At least, she will be the better prepared when she is ready to undertake it.

Woman's reaction against limitation, and her eagerness to see and be a part of life, are natural. Again, it is a part of her history, and is the result of her repression period. Since the girl must have a part in the larger social life, she must have a training for citizenship. There never has been a time in the history of civilization that woman has not wielded a powerful influence in matters of state. In the past, however, this influence was largely one of intrigue and a dominance obtained over man, not so much by right and reason as by the magic of personal charm, whereby she has many times in history been the power behind the throne and caused a radical change of administration. Again, witness the influence of the unquenchable fires of passion as displayed in the part women have played in revolutions. Observe the untamable spirit of revolt in the women of Russia at present, and how woman's natural gift of silent, secret persistence in the direction prompted by her heart has made her an element absolutely unimpressed by the iron hand of despotism. Recall how in England, and in many places in America, women have already become powerful allies in matters of state. Women are by nature partisans, because they are led largely by their emotions; and it is this very disposition to espouse a cause and to adhere to it, with or without reason, which is her strength and her weakness; her strength, in that it gives ardor and enthusiasm; her weakness, in that she is frequently led by unreasoning impulse in directions which a more judicial view of the question would forbid. All this shows the necessity of careful training for citizenship, that the girl may not use lightly and carelessly this influence which all must acknowledge.

An easy and interesting approach to the subject, and an adjunct to the usually rather dry and uninteresting subject of civil government, can be given in weekly or monthly discussion of current events—not merely local questions, but international ones also being considered, since the tendency of our time is toward internationalism. Enlist her interest in all civic questions; lead her to espouse the cause of right and justice, and to become the champion of the weak and helpless; to assert her prerogative of home-maker, care-taker, and peace-maker; to realize that, while her chief responsibility is toward the small circle immediately about her, she owes something to her fellows; and thus develop in her a larger sympathy which will tend to develop in her the impersonal side.

As woman has set the standard for beauty, she may also be said to be most deeply appreciative of it. So we would have our girls trained in æsthetic studies. Art and beauty are the outgrowth of surplus energy—energy that has not been required to subdue material things, and hence can expend itself in pure enjoyment. In our country the leisure class—that is, the class

which will have the most surplus energy to expend in this direction—is not a social class, but a sex class. It is the great body of women of the well-to-do, tho not embarrassingly wealthy, class who are the leaders in art, music, and general culture.

Art and music have been introduced into the school to increase the capacity for enjoyment, and for higher thinking and living, and to give poise and grace and content to the lives of our girls. In addition to the enjoyment and culture derived from the study, it teaches the girl how to appreciate the beautiful in foreign art, and to value whatever beginnings there may be in her own country; and finally, in its general study and appreciation, thru-out the country it fosters a taste which may lead later to distinctive art or music creation, and which will develop the culture lacking at present in the United States.

As woman enjoys life largely thru the emotional and personal side; and as the social circle is her largest field of influence, we should give the girl something of this atmosphere also. We can do this by creating a miniature social world in school club or school society. Here she can measure herself with her comrades, and find her strength and weakness. It teaches her law and order and subordination of self, since caprice and self-assertion can have no place when the good is not for the few, but for the greatest number. The club program offers an opportunity to use the studies of the school in a new and larger relation, and from a closer and more individual viewpoint. The responsibility necessary for the proper management of the exercises of the hour will do much to train her for the later responsibility which are sure to be her portion.

In following the girl thru the evolution of self in her relation to society and school, we have found that she is just as womanly, just as feminine, as the older type, yet in advance of that type in that her education and training have fitted her for the larger service of humanity. Nothing is more beautiful than a refined, educated, cultured, sensible, practical woman, full of a great mother-heart for home and its problems, and for humanity and its problems. It is in our power as educators to develop from the raw material in our schools a product that will have in embryo this mother-element, which in the following of its natural instinct will create a higher type of home and society.

DISCUSSION

F. LOUIS SOLDAN, superintendent of instruction, public schools, St. Louis, Mo.—There are certainly sex characteristics in education. The girl baby learns speech earlier than does the boy. The girls and the boys show different lines of evolution. Do you infer, for this reason, that separate education must be given to the two sexes—separate in English, physics, and so on? To admit that would be to take a wrong view of education, a view which we discarded long ago. Does it follow that, because the two are different, we must establish different types of education for the

two sexes? Education is what you seek in response to your teaching; it is that reaction on the part of the child which comes from contact with truth. Let me say that a girl will react to the same teaching as will a boy, but the girl will react in a girl's way and the boy in a boy's way. The light which passes thru those windows is of clear color, yet to you and me it appears red or yellow; so the light of good teaching will break in the soul of a boy into a product that seems different from that in the soul of a girl; but in both cases it prepares for life. My friend says school is life. Then since life brings the sexes together, I think that the greatest good is secured in the schoolroom when both sexes are sitting under the same teaching. If I wanted to know all about man and what he is needing in education, I would invite a good woman to talk; and if I wanted to know something about the girls' education, I would not hear from a woman alone. I would ask some good father who has grown daughters to tell me what he thinks the education of a girl should be.

CHARLES D. LOWRY, district superintendent of schools, Chicago, Ill.—The topic is a large one, since it includes the whole subject of "education" of children. It is an appropriate topic for us to discuss, since our standing problem is so to adjust the teaching of different subjects as to form a well-balanced course of instruction. The division of the subject and the choice of speakers indicate that prominence should be given in the discussion to the difference between the instruction that should be given to boys and that which should be given to girls. Both phases of the subject have been discussed in the two papers. It is interesting to notice, however, that, while it is shown clearly that girls and boys do need different instruction, yet these differences are not so great as to necessitate the maintenance of separate elementary or high schools. Only when technical education is begun is the separation of the sexes imperative. All of our education, if it is to fit the boys and girls for life, must be of the kind that gives opportunity for the development of the individuality and training in the art of working together. The education which children give one another is one of the chief advantages of the public school.

The pupil comes to school with only a vague and superficial knowledge of the things about him. It is the business of the school to show to him the deeper meanings of the processes of nature, industry, and society. For instance, it is the function of history-teaching to make the child feel the movement from the past to the present; to show, for example, how transportation has developed from the canoe and the covered wagon to the steamship and the railroad train.

The child is in the schoolhouse only a part of his life, and we should be very careful to give him such habits of study as will assist him to carry on his education thru life—habits which will prepare him to attack new situations and solve new problems. "Culture" studies should not be separated too widely from "practical" studies. That was the mistake of the manufacturer quoted in Mr. Halleck's paper, when he said he would prefer, if the boy is going into a shop, that he should not have had manual training. Such a boy is in special need of manual training, in order that he may have the ability to grasp the full meaning of the processes with which he is to deal, and to make his day's work a means of culture.

The point Mr. Halleck makes in reference to the care of domestic animals is interesting. Pupils in school are apt to think that mistakes are of little importance. If the pupil can have impressed upon his mind the close relation between cause and effect, the instinct for accuracy and carefulness will be established. My son had a lesson of that sort when he found that poor care of his chickens reduced the output of eggs. The same lesson is well taught by manual training.

As a final result, the pupil should come to such a knowledge of his tastes and capacities that he can go into technical work and know his place without making numerous failures.

WHAT KIND OF LANGUAGE STUDY AIDS IN THE MASTERY OF NATURAL SCIENCE?

W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION

My thoughts have lately been directed toward the relation in which the advanced specialized higher studies stand to the body of preparatory branches. Some weeks ago I had the honor of addressing the members of the National Association of Faculties of the Agricultural and Mechanical Colleges (usually called the "land grant" colleges), endowed by Congress in 1862 and twice subsequently. The latest grant provides that the $25,000 annually paid to each one of these colleges shall none of it be expended for foreign languages. It had happened before in the state institutions which arose on the foundation of the endowment of 1862 for the establishment of colleges for the benefit of agriculture and mechanic arts, that older institutions, modeled on the basis of the college or university for general culture, had obtained the advantages of said endowment, and, not being limited in their application of the fund, had used it for the most part in strengthening what I have called the vestibule to education—the general preparation for higher studies. Inasmuch as the students seeking general culture were far more numerous than those who had marked out for themselves careers in special industrial studies, it had come to pass that nearly all of the benefits of the agricultural and mechanical endowment had been applied to the branches which underlie common culture—namely, foreign languages, and especially the so-called dead languages, Latin and Greek. The new endowment of August, 1890, therefore provided in a careful manner that its proceeds should not go toward strengthening the vestibule of education, but should be applied entirely to the superstructure of the special education intended for agriculture and mechanic arts. It could be said at this point that application of the earlier endowment, that of 1862, in such lines as had already been fixed in the older college education was necessary partly because there had as yet not been formulated, or at least not yet published, any systematic and well-graded course of instruction in agriculture or the mechanic arts. There being comparatively little experience in this field, and only feeble attempts to reduce it to a course of study, the directors of higher institutions found themselves in the presence of a formidable difficulty in carrying out the obvious intentions of the first endowment, that of 1862. In the meantime nearly thirty years had elapsed of experiments in collecting and systematizing a body of doctrine relating to agriculture as it is found in the United States and elsewhere. The time had arrived, therefore, when a new endowment could be guarded in its application, and directed toward the specialties of agriculture and the mechanic arts, and its application to instruction in ancient and modern languages entirely prevented. Nothing of this new endowment should go to the traditional foundation studies of higher education, with the exception of mathematics. The history of the application of the first endow-

ment, that of 1862, had shown conclusively that no superstructure would arise on its foundation, and that the endowment for agriculture and the mechanic arts would only go so far as to furnish a vestibule to all kinds of higher education, and especially to education for the learned professions. This incident led me to some new reflections (new only to me, perhaps) on the relation of preparatory studies to the advanced studies in science.

In what way are all those early studies in the high schools and in the freshman classes of colleges and universities related to progress in the mastery of science, and to the original investigations which advance science itself and make possible its applications to industry?

The interesting and suggestive course of study in the agricultural department which is published in the catalogs of our state universities supplies me a text. I notice the words agronomy, zoötechny, agrotechny, rural economy, rural engineering, apiculture, viticulture, botany, zoölogy, pomology, olericulture, floriculture, horticulture, meteorology, mathematics, geology, physiography, biology, bacteriology, entomology, veterinary science, agrostology, embryology, cryptogamic botany, vegetable cytology. This course of study, bristling with Greek and Latin technical terms—there are in this list of words seventeen Greek derivatives and ten Latin—goes to prove that Latin and Greek are not dead languages, as they were supposed to be a few years ago, but are languages that are quite alive in science and the arts. Even in agriculture the sciences have borrowed words both from the Latin and from the Greek, in order to arrive at a perfect accuracy of expression. Colloquial words of Anglo-Saxon roots are well enough to express ordinary experience, but not at all adapted to the expression of the results of precise and systematic investigation. There are two vocabularies in a language—the colloquial vocabulary and the vocabulary for science, literature, and philosophy. Everybody uses the colloquial vocabulary for the expression of the daily needs of common life, but only those who are specially taught in the branches of a higher education can use intelligently the second vocabulary. Ordinary colloquial discourse is well enough in its way, but is only a beginning of language. Its objects are simple and undefined, and on the whole shallow as to thought. The word "knowledge," for instance, expresses in one word all sorts of information and reflection. It is a great, undifferentiated heap of results of acts of knowing; while "science" expresses a systematic organization of facts in such a way that each fact throws light on all the others. Knowledge is for the most part a heap of isolated, undigested particulars of perception and reflection—mere shallow facts mixed with more or less profound observations of all kinds. Science, in the first place, classifies the facts and brings together those which throw light on each other into one branch of science. Then it connects these systematically so as to show their order of genesis from the first to the last, and how the causal action of one fact affects other facts, and how it itself is derived from the causal action of states and conditions preceding it. The difference

between a dumping heap, where all sorts of things that are of no use are piled in confusion, and a regular and symmetrical piece of architecture is something like the difference between knowledge and science.

By causality one sees the multiplicity of facts in their unity. The technique itself indicates the place of the fact or event in the causal chain that produces it.

This reminder of the difference between science and mere knowledge has to be kept in mind, and is preliminary to the answer of the question: What kind of language study aids in the mastery of natural science? One cannot help thinking, as he looks over the names of the divisions in the scientific course of agriculture, or in mathematics, or physics and chemistry, or geology and geography, that the pupil's time must be taken up in the higher special courses of study, in memorizing technical words of many syllables, unless the pupil has in his earlier preparation made the elements of those words significant. If the student has learned Greek in his preparatory years, the word "agronomy" divides out for him at first sight into the roots of the word *agros*, a "field," and *nomos*, signifying a usage or principle of management; "agriculture" suggests the Latin word *ager*, "a field," and *cultus* from *colere*, "to sow or plant." We shall see that a knowledge of the meaning of the parts of a word is a powerful aid to the understanding of the meaning of the whole word, and to the retaining of the same in the memory. Thousands and thousands of technical terms occur in botany, all founded on Latin words. A superficial study of Latin will increase the power of comprehending the scientific technique of botany. As long as one does not know the language from which the technical terms are derived, he is forced to make a greater effort to remember them. Compare the difference to the ordinary college-educated man between a term derived from the Sanskrit and a term derived from the Latin. "Magnanimous" can easily be understood by the Latin student who recalls the word *magnus*, "great," and *animus*, "the soul or mind;" the word used in the Bhagavad Gita, *mahatma*, frequently used by students of the so-called esoteric Buddhism, is difficult to remember unless one has the same elementary knowledge of Sanskrit in which case he recognizes the first part *maha* as meaning "great" and equivalent to *magnus*, and *atma*, "the soul."

Take, also, the geographical name of the country at the mouth of the Indus river in India; the territory is called Punjab—a jargon word at first to the Englishman. The person superficially acquainted with Sanskrit recognizes the first part of the word, *Punj*, as meaning "five," and *ab* as meaning "river." The Punjab is the delta land between the five rivers or branches of the Indus at its mouth. An elementary knowledge of Latin and Greek gives one the power of retaining and of comprehending technical terms with a fine sense as to the shades of meaning. It is a matter of everyday experience to see students not acquainted with Latin make a mistake in spelling or in identifying the parts of a long, technical word, and, what

is worse, a mistake in getting hold of the shade of meaning indicated. Shakespeare's plays are full of puns and of blunders founded on the mistakes of the illiterate people who do not understand the Latin part of the English language.

This brings us to the insight that Latin and Greek are very far from being "dead languages." No longer used colloquially for simple conversational speech, the classic languages, Latin and Greek, are all the more used for preserving the results of scientific observation, and for literary expression of fine shades of feeling and distinctions of thought; and it is very necessary to get the elementary sensuous significations of the Latin and Greek roots, which one does in his three years' high-school study of Latin, in order to acquire a fine sense of the use of these words in scientific technique. It also makes the technical vocabulary as easy to remember as the colloquial vocabulary. The word "carnivorous," for instance, has the root *carn* and the root *vor*, *carnis* meaning "flesh," and the root *vor*, "to eat or devour;" The whole word meaning "flesh-eating." The lack of a feeling of the original meaning of these words produces the ludicrous use of language caricatured by Shillaber in his *Sayings of Mrs. Partington*. Mrs. Partington is a type of the person who has no adequate sense of the original meaning of the classical derivatives which she uses. Uneducated colored people often furnish examples of speech of this kind. One of them, for instance, goes to a drug store and asks for a "nanny-goat" for a particular poison, meaning antidote." And Mrs. Partington said that "total depravity was a very good doctrine if you could only live up to it." The Greek meaning of the word "antidote" is just as easy to remember as the name of the domestic animal to a person with a smattering of Greek, and the Latin meanings to total and depravity are equally easy to the one who has given some study to Latin.

The fact that what is called a complete English dictionary contains three Latin or Greek derivatives to one word from a Saxon or any other Gothic source shows us that to the educated man the livest part of his language, so far as science and literature and the higher order of thoughts are concerned, is the Latin and Greek contingent. Any person who had to learn botany or chemistry would find it worth his while to begin by a three-year study of Latin and Greek, just for the benefit of these languages in his scientific education. So, too, for history or for poetry, and, by far more essential, for medicine, the law, and divinity.

I admit that there is abuse of time and energy in studying Latin according to the favorite methods pursued in preparatory schools and colleges. I had a poet friend—a chum of mine at Phillips Academy, Andover, in the time of Samuel H. Taylor, the Greek scholar. Meeting him at a reunion of our class, after many years (a thirty-fifth anniversary), I asked him: "What did you learn at Andover, and what did our class learn?" He replied: "We learned the exceptions. To be sure, we learned the paradigms, but that did not take much of our time." It was the committing to memory

of lists of unfamiliar words which were said to be exceptions to the regular declensions and conjugations. The memorizing of these exceptions, however, is not a serious matter as compared with the time spent in classical schools in learning the quantities of vowels in Latin words. In the English universities, Oxford and Cambridge, and at the English preparatory schools, they learn not only the laws for quantity, but they learn the numerous exceptions and the innumerable cases of vowels which are long or short only "by usage." They learn these with such painstaking as would be required to make Latin poets, and they test the quality of their scholarship by actually composing written verses in Latin. This is all the more astonishing because no person knows precisely how the quantity of Latin vowels affected their pronunciation. There may be some shrewd guesses on this point, but there is little real knowledge on it and no complete theory.

One is led to suppose that the English gentleman desires to celebrate his contempt for what is useful, not only in the line of bread-and-butter studies, but even in the line of producing science and literature. He studies the quantities of Latin vowels to show his contempt for utilities either in the conquest of nature or in the combination of men into social wholes for business or politics. I admit that in some cases, especially in those of Tennyson and Milton, the study of Latin quantities may possibly have quickened the ear to the melodies in the English tongue, and that we owe in the case of Tennyson and Milton much to their work in the preparatory school in the way of learning Latin quantities. But if "Shakespeare had little Latin and less Greek," he certainly excelled both Tennyson and Milton in his discovery of the capacity of his native tongue for a greater compass of music than the classic tongues ever possessed. However this may be, I for one am glad that American preparatory schools, especially the public high schools, waste very little time in the learning of Latin quantities. For those who claim conservatism in this matter, and insist with great stress on the study of quantity as the real key to the benefits of Latin and Greek, there is very little defense since the studies of comparative phonology and other branches of classical philology reached their height in the last generation.

It remains true, and will remain true, that for us Latin and Greek must be studied because they are still living in the English language, and are not dead languages; because they are living languages, not of the colloquial vocabulary of common sensuous experience, but of the scientific vocabulary; not only of the strict sciences, like mathematics and logic and physics, but of the experimental and historical sciences, one and all; and because the characteristic vocabularies and styles of the great literary writers of English are to be identified thru the possession which they show of the fine shades of meaning, as well as the possession of newly attained powers to express moods of the soul. Their refinements of taste, their lofty aspirations and

subtle thoughts, are all made possible of expression by skill in using the Latin and Greek derivatives which reënforce the Anglo-Saxon vocabulary by a wealth of words three times as numerous as that derived from the old English.

To prove that my sweeping statements with regard to the use of the Latin vocabulary of the English language are not exaggerated, I will quote a further list of the sciences, and sometimes go into their technique. There are, for instance, physiology and anatomy, anthropology, ethnology, archæology, philosophy (with such branches as cosmology, psychology, ontology, metaphysics, epistemology), geology, paleontology, zoölogy, entomology, ichthyology, biology, bacteriology; astronomy, constellations: Ursa Major and Minor, Canis Major and Minor, Boötes, Auriga, Cassiopeia, Cygnus, Orion, etc.; the zodiac: Aries, Taurus, Gemini, Cancer, Leo, etc. The great stars are, many of them, named with Arabic names: Aldebaran, Rigel, Merak, Dubhe, Deneb, Vega, and are not significant to mere Latin scholars, as are the names of the constellations to which they belong. But, on the whole, astronomy has a Latin technique. Meteorology uses Greek and Latin terminology. Medicine sets forth its doctrines in Latin and Greek, using Greek for processes and general departments: allopathy, homeopathy, diagnosis, nosology, therapeutics, neurology, ophthalmology, and the like; and Latin for dentistry, osteology, craniology, vertebral, cervical, cardial, arterial, labial, lingual; and so on to hundreds of technically precise terms.

Botany also has a greater preference for Greek words in its technique for the larger classes or departments and the general processes. Its four general divisions as a science—structural, morphological, physiological, and systematic botany—use three Greek derivatives and one Latin. It divides plants into orders, suborders, tribes, genera, subgenera, sections, species, subspecies, varieties; paleontological, exogenous, and endogenous.

Its special subkingdoms are named from the Greek words *thallos*, "a shoot;" *bryon*, "a moss;" *pteris*, "a fern." Most of us have read some time ago a charming piece of Herbartian writing which illustrated the meaning of the technical word "apperception." The book was called *A Pot of Green Feathers*, and it told of an object-lesson in a London school in which the children studied a flower-pot full of ferns brought in for the purpose from a neighboring hothouse. It seems that the children had not seen ferns before, or at least had not learned the special name for them, and when questioned on it one of the children volunteered her statement as to the new plant by saying that it was a pot of green feathers. Now, it is interesting that the child came upon the same idea that the Greek mind had in naming a fern, for it called a fern *pteris*, or "feather." I continue my list of botanical terms, which calls the fourth subkingdom of plants *phaneros*, or "showy." They are called showy because they celebrate their maturity

and reproduction by showy blossoms and fruit. We have four subkingdoms of plants: thallophyta, having blades or shoots; bryophyta (moss); pteridophyta (ferns, feather-plants); phanerogamia.

Hundreds of names of functions and processes, thousands and thousands of names of classes, are found in botany. These names cannot be retained in the memory without long study and great effort, but the botanist who does not know Latin and Greek finds the polysyllabic names a jargon of meaningless syllables and sees that he will save time by taking up the classic languages and continuing his study of them for three years and longer. When the parts of the long word begin each to have a meaning, and a meaning which relates to the function or process of the plant, and makes the whole word significant, the memory is relieved of a dead weight, and it hands over the larger part of its burden to the judgment and understanding.

Mathematics sticks closer to the Greek than the other sciences, because it is the oldest science. The student who wishes to aid his memory by the sensuous meaning of the parts of the words that form the strict and severe technique of mathematics must take his Greek course for two years or so, mastering his paradigms, and reading simple descriptive Greek prose until the colloquial words become familiar to eye and ear. Then he will have no difficulty in memorizing the various -metries and -gons and -hedrons or the other categories of geometry. Latin will afford similar help to him in the analytical branches of mathematics.

The memory, as I have said, has little to do where the causal connection is indicated in the meaning of the names and where sensuous experience is brought to mind. The constructive process, pictured by us in imagination, lifts the memory on its wings, so to speak, up to intellect and reason.

All these necessary requirements are provided now by the high schools, which are becoming so numerous as to be found in every small city and large village. The number for the present year is 7,500 high schools. In the public high schools in 1890 less than 35 per cent. were studying Latin, the total number being 70,411; but the 35 per cent. had risen to 51 per cent. in 1904, and the total number studying Latin had increased from 70,000 to 323,000. So the private schools, in 1890, enrolling 145,000 in all, had 31 per cent. of their pupils studying Latin. But the percentage studying Latin in 1904 in the private secondary schools had increased to 45 per cent., and the total number of secondary students in private institutions had increased from 145,000 to 169,000, so that in these two classes of institutions the number studying Latin amounts to 369,329 pupils. It may be assumed that nine-tenths of all of the students enrolled study Latin at some time in the course, and thus prepare themselves for the study of science and literature. The high-school graduates who do not subsequently take up science or literature in college work will be able to read a higher order of literature in books and magazines, and understand a great deal of science.

THE SUPERINTENDENT'S AUTHORITY AND THE TEACHER'S FREEDOM

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[STENOGRAPHER'S REPORT]

Mr. Chairman, Members of the Department, Ladies and Gentlemen:

Some time ago in the state of Indiana, where the president of this department lived before he moved to the state of presidents and sons-in-law of presidents, the children were taking advantage of a recess period to engage in a game of playing school. As is always the case on such occasions, they were representing, as their conception of a school, the worst conditions they had ever met with. The boys and girls were all rebellious, indolent, and lazy. The teacher belonged to that peculiar class who are afraid their rights will not be recognized, and, like other heathen, she used a great many vain repetitions, evidently hoping to be heard for her much speaking. With that class of pupils and that type of teacher, you can easily imagine the school. Several older people were spectators of the scene, and, as they cast their eyes over the school, they noticed one boy who seemed to be taking no account of the proceedings in particular, except to walk up and down the aisle occasionally, once in a while resting his hand upon the head of some boy, again going up to the teacher's desk and looking thru copy-books, examining the crayon used, and so on. Finally some one suggested: "This boy seems to have nothing to do." Immediately came the answer: "He is not expected to do anything; he is the superintendent."

That perhaps may represent the idea some people have of a school superintendent, and yet it is no flattery to the school superintendents assembled here or elsewhere, to say that such a superintendent is exceedingly rare. I think more and more, as the years go by, the superintendent is expected in the community—and meets the expectation, as a rule—to stand for something very definite. He represents the authority of the school.

My own personal conviction is that this authority should originate with a board of education and be kept as close as possible to the people. I firmly believe that the superintendent's authority should give him the initiative in the employment of every teacher, and in directing the general educational policy of the community that he serves. Whatever our ideas may be on that, I think we will admit that there is a place in the educational system for authority, and that that authority should in no way, and will in no way, interfere with freedom properly understood and properly used.

We find these two factors in everything. If we look about the universe, and go back to our first lessons in geography, we recall that there is one force that holds things stable, and another force that keeps things in motion. In nature these forces are always so delicately adjusted that no one can find any criticism of the results that follow the actions of both.

We find these same two factors in the political world. Nobody but an unreasonable partisan fails today to see good in the political creed of both Alexander

Hamilton and Thomas Jefferson. A few times in the history of this nation we have reached high tide under the administration of a great soul, who was competent to appreciate and recognize fully the good in both schools of politics.

Under the immortal Lincoln a terrible strife of four years in this nation was so guided and controlled that, when the end finally came, the world recognized, as never before, the majesty and authority of our government; and yet at the same time a new emphasis was placed upon its being a government of the people, by the people, and for the people.

No one doubts for a moment that our chief magistrate, Theodore Roosevelt, will exercise every particle of authority vested in him, in his holy warfare against organized robbery, existing either as corporate greed or political graft; and yet at the same time everybody is absolutely certain that the freedom of the humblest individual in this nation is, after all, the dearest idol of our great president's heart.

It makes no difference where you go—into theology (I feel free to discuss that, because I know you all know as little of that as I do), if you please, and we hear there of the conflict between God's sovereignty and man's free will; when you come to the realm of the school, there is certainly a place for authority represented by the superintendent who gets his authority from the people thru the board of education, and also a definite place for the freedom of every sane teacher. But while this is true, I think it is very important that this relation be thoroly understood.

Occasionally we hear nowadays—not from the old guard, as it were, but from the supposed advance agents of the new education—that there is no longer any need of authority in educational affairs. This last summer I sat for an hour on a platform in this country and listened to a man who was introduced as an authority on elementary education, and that entire hour was taken up by him in telling the teachers that in the school he was connected with, every teacher and every pupil had absolute freedom. Why, there is no such thing as absolute freedom in this world! There is not a man in this audience tonight, however well-behaved he may be when away from home, who is not subject to law; and I have always noticed that the man who obeys the law is the one who complains the least about it; on the other hand, the man who is talking most of freedom is frequently the anarchist who ought to be in jail. I am inclined to think today that the teacher who is worthy of freedom in the true sense is the one who rarely mentions it, while the one who is eternally talking about her individual rights is the one who is not prepared to exercise rights of any kind.

I am perfectly free to admit that authority may be carried to extremes in the schoolroom; possibly in the past that has been the tendency. I know I have heard a great deal of criticism of public schools in this country, much of which seemed to me unfounded, which indicated that the organization of the school was looked after at the expense of the individual child. That may be true, but isn't it possible, my friends, that under the plea of recognizing the individuality of some teacher who has no individuality, who has simply mistaken a bundle

of peculiarities for that article—isn't it possible that the child may suffer from too much of that kind of freedom?

When we come to the organization of the school, I take it that no sane individual doubts for a moment that we need classification. I suppose the educational crime for the past twenty years in this country has perhaps been the crowding of too many boys and girls into classes taught by one teacher. This department a few years ago applauded a statement that no teacher ought to have over five pupils under her control. I don't know how many of you were there, but I think nearly everyone present applauded that statement; and I commenced thinking it over. I don't know how many teachers there are in Louisville, but I do know that, if this system of education provided a teacher for every five children the city would be bankrupt in a very short time. Such a statement as that argues for the financially impossible, and also for the educationally undesirable.

You will pardon me if I am personal tonight, and say I think I have done my share of teaching poor schools; but the poorest school was one that I taught in the country, having twenty-five boys and girls enrolled. I took the measles from some unknown source, was out two weeks, went back, and found that I had distributed them to nineteen of the twenty-five. I then taught school three weeks with the six children. I am absolutely certain that was the poorest school I ever taught. I could not help being amused when I heard the utterance attacking organizations of schools and saying that there should be a teacher for every five children. I could not help remembering that the man who made it had given his unqualified approval to that report, which said that the small school is necessarily a poor school; and, because a small school is necessarily a poor school, we have been talking of centralization of rural schools all over this country in order that we may get enough of boys and girls together under one teacher to give them something of the inspiration that comes from class spirit. We must never lose sight of that while we are thinking of this educational problem. Too many boys and girls under one teacher is an organization that is faulty; but we need not to go to the opposite extreme to correct it. We are in danger educationally from too much specialization in the public schools? Please do not think I am attacking the specialist. The specialist in his scholarship is an absolute necessity in this country, but his tendency to be narrow, and see only one little fraction of the educational problem, is a danger to any school system. I do not refer to the specialist in the college or in the high school, but to teachers whose idea of freedom is that they shall think only of the educational problem in the one little grade or group they teach, and never have any concern for the school as a whole.

You know the criticism of education all along the line. It begins with the college. Did you ever sit in a college association and listen to the criticism of the public schools? What is the burden of it? The poorly prepared freshman that comes from the high school. Well, now, I have no suggestion to make to the college professors other than this, that it would be good for

them to take a vacation once a year—and I wish it came oftener than that—and spend a good part of it in visiting some good primary school, and there sit at the feet of some woman who knows how to teach, and learn something of the sympathy that actuates the heart of a great teacher. Again, I have often thought that, if some of our college friends would look at some of the seniors they graduate, they would complain less about the freshmen that come up from the high school. I believe that the trouble is that the average college man is thinking only of college education, and forgets the rest of the educational problem.

Now, we public-school teachers are just as big sinners as they are. Go into the high school when it opens in September, and what is the burden of the complaint? Oh, the poorly prepared boys and girls that come from the grammar school! And yet there is not a high-school teacher that does not know that the year before he has urged the promotion of boys and girls that were not any better prepared for promotion than those that come from the grammar school. If we are honest with ourselves, we will all admit that we have to push along these boys and girls in the different grades. If we did not, they would all get in one place, and form a sort of educational drift-wood that would dam up the whole educational stream, and there would be absolutely no hope of any progress. I don't care how much you superintendents talk about your systems of promotion; I know what you do. You have a boy in school that can't make his grade or group. If he is reasonably faithful, and you think he will hold out to the end, you simply keep him two years in a place, and then push him on for somebody else to work with him two years longer. Now, be honest with yourselves and tell the truth about this problem. That is what you do. It is done in all the schools all over this country. We have to do it.

Have you ever heard the grammar-school teacher talk? The school opens in the fall; the boy comes home from a happy vacation; frequently he has forgotten a great deal of what has been taught previously; and he finds himself in the presence of some unsympathetic teacher who prides herself on her individuality, who begins to complain of the poorly prepared boys and girls that come up from the intermediate grades. If any of you are here that have ever done that, just think of the sins you committed last spring when you recommended a half-dozen boys to the high school who you knew were not ready for promotion. The fact is, we have to meet these problems and deal honestly with them, and do the best we can.

And then the intermediate teacher complains of the primary. A boy has been promoted who can't read. Well, suppose he can't. You can teach him to read in half the time you are complaining about it. I always feel so sorry for the primary teacher. She has nobody to complain about, unless it be the parents or Deity; and neither one will pay any attention to the complaint.

I like to see a college professor, of course, who knows more about

college work than anything else; but I want to see a college professor who has heart enough to think of some of the problems that the public schools have to deal with. I like to see a high-school teacher, teaching Latin, and knowing more of Latin than he knows of anything else; but I want him to remember there is some difficulty in teaching fractions down along the line. I want to see a primary teacher who is heart and soul a primary teacher, but also broad enough in her sympathy and interest to see the child not only in the primary room, but as he goes up thru the intermediate and grammar grades, high school, and college. Every teacher should be interested in the work of every other teacher; and to my mind what the graded schools of this country need today more than any other one thing is teachers who shall be free to do all they possibly can for the boys and girls in their special grades and departments, but who will never forget that other teachers besides themselves have difficulties to meet, and all be interested in this great problem.

I think we need some authority relative to a course of study. I honestly believe that. I do not mean that the superintendent shall be an autocrat in the making of a course of study, and say: "This shall ye teach and nothing more." I mean that teachers ought to be consulted, and when a school faculty made up of teachers of all grades, and supervisors, and the superintendent himself, unite upon what they believe is a good course of training for the boys and girls, then I believe there ought to be some authority that shall say that that course of study shall be taught, and that discipline, whatever it may be, shall be exercised. There is a place for such authority; but, of course, we should not go to the extreme. I know it is possible to adhere so closely to a text-book that we may destroy the intellectual life of any child. It may be possible for a boy to go thru a school and actually think there is nothing in the universe worth knowing outside of the leaves of the text-book.

The following incident will make plain my meaning: A few years ago our good friend, William Hawley Smith, gave one of his stirring lectures in the state of Michigan. In his audience was a young principal of a village school, who was much impressed with the appeal of the lecturer for a broader recognition of the varied capacities of children. About a year afterward this young man introduced himself to Mr. Smith, as they were traveling on a train, and related the following experience:

> After hearing your lecture I returned to my school work determined to reform some of my methods of teaching. I lived in a Michigan village, located in a farming community whose chief product is corn, hundreds of thousands of bushels of which were stored in elevators not far from the schoolhouse. This corn naturally brought rats in great numbers, and I thought that, if there were any object in the world that the children knew something about, that object was a rat. One morning I closed the recitation in the text-book sooner than usual, and proceeded to begin my reform. I asked the boys and girls how many of them had ever seen a rat. Of course, all could answer this question, I then asked them a second question, which I assured them all could not answer, as the reply would require a close observation, which I feared they were not all in the habit of making.

This second question called for definite information relative to the length of hair on a rat's tail. The answers furnished various lengths, from a small fraction of an inch to several inches. The "psychological moment" had arrived. I was about to give my first lesson in the reform movement which was being initiated. I called attention to the difference in the answers, and asked how the question could be correctly settled. One boy signified, by his uplifted hand, a willingness to respond. I called upon him to do so. He replied: "Look it up in the dictionary!"

I presume that you will agree that the directing authority of that school had insisted up to that time on having teachers adhere a little too closely to text-books and works of reference, and that as a result those boys and girls had gained that false idea that we want to keep away from—that books are the only source of information. And yet, why is it that, when we try to correct a wrong, we are so apt to go to the other extreme? Because some other teacher has made a mere machine of herself and her school by such rigid adherence to a course of study and text-books is no reason why we shall go to the other extreme and say that the text-book has no place in education. If I had to choose between two evils I should take the teacher who could teach a text-book well, rather than one who imagined that a text-book had no place in education, and that she could teach everything on what she called the lecture plan. But there is time in this country, my friends, for a teacher, and a place for a teacher who can teach a boy that exceedingly important lesson that will help him to gain that power which will enable him when he gets out of school, to go off, if you please, by himself and take a book and get the meat out of it. I believe in reasonable freedom of the teacher in carrying out the course of study, but I do not believe a teacher should be so free that she can use her own sweet will absolutely to ignore all directions of the central authority in education, which says there are certain things that must be taught and taught thoroly.

Now, this authority in education should be combined with sympathy. Here, sometimes is the trouble. We do not object to authority, if it is sympathetic authority; and for that reason I have always had a firm conviction in my own heart that no one is fitted to superintend a school—perhaps there are exceptions, and the exceptions may be here—who has not come up thru the ranks and who does not know by experience something of the difficulty of the individual teacher. I care not how much scholarship a man may have; he may have been educated by all the universities in this country and the other; and yet put that man in authority over teachers, who knows nothing of the difficulties of the individual teacher, and he never can have that sympathy which will make him a leader rather than a mere director of educational affairs.

And then may I say, on the other hand, that the freedom of the teacher should be thoroly mingled with loyalty to the superintendent? Just as we nee a superintendent who is in sympathy with his teachers in the execution of his authority, so we need teachers all over this country who are absolutely loyal to the superintendent as the directing authority of a school system. There

is only one person in the world for whom I have a deeper sympathy than I have for the teacher. I think I know something of what it is to have to struggle along and teach. Some one has said: "Teaching school is hard work; teaching forty boys and girls—not forty acting like one, but each one acting like forty." I think the man who uttered that had taught school. I say there is only one person I sympathize with more than I do with the teacher. That person is the superintendent. I may be talking to teachers here tonight. I judge there are some present, and I wonder if they have any idea of the battles that the superintendent has to fight that they never know anything of. I have absolutely no respect for a superintendent who will in any way speak an ill word of a teacher unless that teacher is in a position to answer the criticism and defend herself; and I have, if possible, still less respect for the teacher who will, in the absence of the superintendent, speak a disrespectful word of his authority and his place in the educational system.

It is only when we have this authority, properly constituted, mingled with the sympathy of which I have tried to speak, and this freedom of the teacher to work out her own salvation, and yet with the will of the superintendent working thru her that we can hope, as the result of the combination, to have authority in education and freedom in education to train a class of boys and girls who will go out into practical life as citizens of a free country, ready at the proper time to recognize the majesty of the law, to be obedient to the call of the government when it comes, and yet at the same time ever jealous of that freedom which that government bequeathes to all.

THE TEACHING OF ARITHMETIC

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The first question to arise in the minds of this honored assemblage on the present occasion may well be how it happens that one not supposed to have been professionally engaged in the instruction of youth should ask a hearing from a body of teachers of such wide experience as that here present. The answer is that during almost my entire adult life I have had occasion to employ and train young men in numerical computations pertaining to astronomy. When candidates presented themselves for employment in this presumably abstruse work, it was naturally supposed that great stress would be laid on the mathematical course they had taken in school or college. After a few years of experience the general reply which I had to make to all questions of qualifications was that proficiency in arithmetic came first in importance, and the first rule, simple addition, was the most important of all. Subtraction was scarcely below it, and multiplication and division were desirable. Next in order came general ideas of quantity, which one could scarcely be expected to acquire without some training in the higher mathematics and yet which evaded exact definition. This standard of qualification was

emphasized because the general rule was found to be that the candidate had learned his arithmetic by methods inherited generation after generation from the colonial schoolmaster, without infiltration from those professionally engaged in applying arithmetic to practical purposes. In the case of more advanced mathematical subjects the main object in view had been mental discipline; and the idea of implanting mathematical conceptions that the student should be able to see and apply in daily work had never entered into the plan. It was therefore often necessary to begin by showing a beginner in my work how to add and subtract.

Another noticeable circumstance was that the deficiency in arithmetic was more marked in American youth than in foreigners, especially Germans. I found that, however little education a German applicant might have had, he was at least as good an arithmetician as the best American. In view of the excellence of our common-school system, the question could not but suggest itself whether there might not be some trait of the American mind unfavorable to the development of arithmetical capacity. But experience has led me to the conclusion that it is more in our methods of teaching than in the want of capacity that the difference is to be sought. When my children went to school, I found that their little brains were being painfully exercised in commercial arithmetic, custom-house business, and other exercises no more conducive to mental efficiency than an hour or two spent in trying to lift a house would have been to the health of their muscular system.

It is one thing to see a defect, and quite another thing to devise a remedy. I have from time to time tried to gain what light I could on the points in which the common-school education in Germany differed from our own. A very little inquiry in this direction, added to what I knew from experience, showed that the German system was broader and more practical in its aims than our own; but I saw no reason to suppose it the ideal one of which I was in search. I therefore tried to reach conclusions of my own as to methods of mathematical teaching, in at least the elementary branches, especially arithmetic. One point was clear; our teaching was too abstract and too much dissociated from objects of sense. In 1892 I published in the *Educational Review* a paper on the teaching of mathematics, in which I emphasized this view, and suggested methods by which elementary arithmetical ideas could be gained and enforced thru the senses. It was discouraging never to learn that this paper seemed to excite attention. But when I returned to the subject during the past twelve months, I was much pleased to find that the very ideas which I had then set forth, not only as to general principles, but in detail, are now features of the latest arithmetics that have been written. Whether my paper was or was not a factor in this change I cannot say. Perhaps the case will be a little more encouraging if it was not. The main point is that if, as the facts seem to indicate, ideas which I then set forth are now found worthy of acceptance by practical teachers, the same may be true of the results of further studies in the same direction, to which I now invite your attention.

In any branch of human endeavor the first requirement is a clear conception of the purpose in view. Our first question must therefore be that of the object aimed at in the teaching of arithmetic.

It is now universally admitted that the main purpose of education is the building-up of the mind and training of the faculties, rather than the acquisition of knowledge or the mastery of details set forth in text-books. "Discipline" and "culture" are terms often used to express this purpose. In the case of mathematics, discipline is commonly considered to be the main object. But it seems to me that a precise definition of what we mean by discipline is wanting. In its most acceptable form, I should define it as the development of the power of co-ordinating the action of the various faculties, and directing it toward a definite end. Granting this, it is, above the kindergarten stage, rather a corollary than an object to be kept primarily in view. I shall therefore pass it over and try to state the purpose in a more definite form.

Without going into details, a very little thought will, I think, make it clear that the main end of mathematical teaching—we might say of teaching generally—is to store the mind with clear conceptions of things and their relations. In the case of elementary arithmetic the things we first deal with are numbers. It follows that a clear conception of numbers and their relations is the end toward which our teaching should be directed. I think every teacher who has carefully studied the mind of the apparently dull pupil will agree that the real difficulty is to give him an insight into the nature of the problem he is to solve. He may be able to repeat the words; but you find that these words do not make a sufficiently definite impression on his mind. Clear and accurate conceptions of the relations of number are therefore to be generated.

To show what we mean by clear conceptions of number, we must stray into the field of psychology. We may conceive of the brain of man as a microcosm, containing within its narrow limits all that the individual knows of any and every subject. There are two universes, the microcosm within us and the macrocosm without us. The success of the individual, not only in all the applications of science, but in every branch of endeavor, depends on the accuracy and completeness with which processes at play in the subject with which he is dealing are represented by corresponding processes in his own microcosm.

Admitting that everything known of external nature has its image in the mind of the man who knows it, I cannot but regard it as a defect in psychological nomenclature that there is no one general term used to express this mental image of an external object and nothing else. To take a familiar example, we all have an idea of the house in which we live. We can think of the building, of the arrangement of its rooms, when it is out of sight, as if we had a picture of it in our mind's eye. This picture is not a flat plan, but rather a model embodying the arrangement of all the rooms in the house. What is true of the house is true of all human knowledge and of its applications.

The engineer can in his mind erect bridges in which the actions of stress and strain shall correspond to those in the actual bridge; in the mind of the chemist, compounds react as in the laboratory; and so thru every branch of knowledge.

One moment may here be devoted to avoiding a possible stumbling-block. The question may be asked whether it is quite correct to speak of the mental images which I have described as if they were permanent existences in the mind, and whether it is not more correct to speak of them as something which the mind forms for itself when necessary, but which cease to exist when we do not think of them. I reply that my argument will be the same whether we take one of these views or the other. If I speak in accordance with the first view, it is because I find it more convenient to think and speak of such an idea as that of the house in which we live, or of a figure in geometry, as if it were a permanent existence in the mind, brought into use whenever we need it, rather than as something to be constructed *de novo* every time we have occasion to recall it. But if one prefers this latter view, he is quite free to adopt it. The main point is that, when we think clearly about any object, we have an image of it in the mind's eye.

From this point of view my main contention is that the first and great object in training the growing child in arithmetic is to store his mind with clear and accurate conceptions of numbers, magnitudes, and their mutual relations which he shall be able to apply with readiness in any actual case that may arise. That I have elaborated this point so fully is due to the fact that it should never be allowed to drop out of sight in our teaching. The latter must be arranged from the beginning with this one end in view. Granting this, the next question in order is that of method. Here psychology can supply us with a guiding rule. However abstract may be the ideas which we wish to plant, they must originate in sensible objects. But they must not stop there because, after all, generalization—conscious or unconscious—is to be aimed at from the beginning. Let me illustrate my meaning by taking the number 10 as an example. I think psychologists will agree that there is no such thing in the human mind as a conception of the number 10 otherwise than as a quality characterizing 10 distinct objects. A written or a verbal symbol may be used for the number, but this is not a conception of it. The point is that the word or symbol being pronounced or shown, the pupil should at once conceive of 10 objects as distinct from either 9 or 11; and should be able to handle that conception in all the ways in which it can be handled.

Here there is an obvious advantage in selecting such objects as have the least number of qualities to distract the attention from the fundamental idea of number. Hence I prefer that the counting should be made upon small dots, circles, or other objects with few qualities, rather than upon more interesting objects which are met with in everyday life. In this suggestion I may seem to run counter to views which are entertained by very high authorities in education. There is, I admit, a very strong argument in favor of the view that the principles of arithmetic are best mastered when the child is taught

to consider them as growing out of the problems that actually confront him in his daily walks. I fully agree that the practice thus suggested is one that should be carried out, but we must not depend wholly upon it. Perhaps I am a little old-fashioned, but I would not abandon the idea of applying the pupil's nose to the grindstone. I have no objection to the grindstone being interesting, and certainly do not wish to make it painful; but I want some drill in thinking of numbers and their relations as dissociated from the actual objects concerned. Just as rapidly as this power is attained in each and every branch, I am willing to see the interesting substituted for the instructive.

We now pass from this general view of the object and method of obtaining it, to the discussion of details. As my views on some points are radical to the point of being revolutionary, I wish to borrow a suggestion from universal experience. We all know that the acquisition of a new language is one of the most difficult tasks which a youth has to undertake during the period of his school life. Our best colleges make a knowledge of French and German one of the requisites necessary to graduation. To one or both of these languages painful attention is devoted thruout a period of one or more years. In former times—to a great extent even today—several years of study are devoted to Latin, instruction in which is, in regular course, continued in the college or university. And yet it is exceptional to find a college graduate who can fluently read at sight a Latin author whose work he takes up for the first time; who can conduct an easy conversation in French, or can write in idiomatic German an account of his day's doings.

In contrast to this result is the fact that every child not a mental degenerate, during the first few years of life, learns to use a language with an ease and fluency which a course of school instruction never supplies. What is more curious yet, there is no striking difference among children in their faculty of acquiring their own tongue. At school we have dull pupils whom it seems a waste of energy to try to educate, and bright boys, who learn more in a month than dull boys do in a year, and learn it better. But no one ever heard of a child especially bright or dull in learning to speak. Differences there undoubtedly are, but they do not compare with those shown under our system of school instruction.

I consider this well-known fact to be instructive in showing that we have at least one branch of education which we find to be toilsome or difficult when the traditional method is followed, and yet so simple and easy by other methods that no special ability is required in the teacher, and no mental strain suffered by the learner. The question I submit to your consideration is: If this is true of one branch of education, may it not be true of other branches, and especially arithemetic? I shall briefly mention the lessons which it seems to me we may gather from this fact.

The idea of arranging subjects in order, and completing one before passing to another, is plausible; but experience shows that it has its limitations. The great principle which the experience alluded to especially enforces is

the educational value of frequent reiteration of very short and easy lessons. This is one of the main features of the system I am trying to develop.

Now, as my object is a purely practical one, it is necessary to have some idea, however brief, of the method by which the purpose in view can be most readily attained. The system I advocate may be called *visible arithmetic*. Taking up subjects much in the order of the traditional arithmetic, the first would be numeration. Visible numeration consists in counting and arranging objects in tens and in powers of ten. At the earliest age when simple arithmetic can be commenced, I should teach the child to count and arrange things in 10's; then to arrange real or imaginary 10's into 100's, and so on. In accordance with the general principle which I have laid down, I would begin with rows of 10 dots each, and teach the counting thru 10 such rows, making 100 in all. We could then imagine the results of laying successive 100's in flat layers on top of each other, thus getting the idea of multiples of 100 up to 1,000.

It would be psychologically interesting to see whether in this way we could plant in the mind what the psychologists call a number form in a more rational shape than it commonly takes. I suppose we all have vaguely in mind from infancy a certain arrangement in series of small numbers up, say, to 100. It would be interesting to know whether a more rational arrangement would be gained by this process; but this is not important for mathematical purposes.

Next would come the process of adding and subtracting grains of corn, or dots, or little o's made on the slate. Methods of doing this are so familiar that I need not dwell upon them. The practice of multiplication and division in this way does not seem to need much exposition. We can repeat a row of any number of dots as often as we please, and count the product. We can divide any number into groups of any smaller number, and find the quotient and remainder. All these exercises on the four rules of arithmetic need not take much time. My impression is that you will find, after a very little showing, that the child is able to perform the fundamental rules upon collections of grains of corn or dots, without devoting much or long-continued effort to the process.

The next step would be to extend the operations to continuous quantity as represented by lines and areas on paper or on the blackboard. The addition of lines consists in placing them, or lines equal to them, end to end, thus obtaining a line equal to their sum. Subtraction consists in cutting off from the longer line a length equal to the shorter one. Multiplication by a factor consists in adding together equal lines to a number represented by the factor. Division takes a twofold form. We may either divide a line into a given number of equal parts, thus obtaining a certain length as the quotient; or we may find how many times one line is contained in another, thus obtaining a pure number or ratio as the quotient.

Please understand that this system of visible arithmetic is not a substitute for ordinary arithmetic, but an auxiliary to it. Whether it is advisable to

master it before beginning regular work with figures, or to carry on the two simultaneously, only experience can tell.

However this may be, in teaching written arithmetic I would have the pupil make his own addition, subtraction, and multiplication tables by the aid of countable things. Taking groups of six things—dots or grains of corn—the pupil finds the successive products of six by different factors, and writes them down in order for himself. He thus knows exactly what the multiplication table means. On the subject of using it I shall presently have more to say. The treatment of fractions in a visible way by dividing lines up into parts is simply an extension of multiplication and division, and is too obvious to need development. I therefore pass on to a further extension of the method.

The next subject in order would be ratio and proportion. On my plan the pupil reaches the first conception of this subject thru the eye by drawing a pair of lines of unequal length, and then other pairs, shorter or longer, in the same ratio to each other. In this way the pupil will see the equality of ratios, independent of the special lengths of the lines. He can then be gradually exercised in forming for himself an idea of what a ratio means, or how equality of ratios is to be determined by multiplication or division. I would not have measurement with a rule applied, but only eye-estimates. This, I may remark, is the general system by which I think we should begin in all cases. The reason for it is that in making eye-estimates we depend more completely upon the eye-conception than when we measure; but, as soon as the conception is gained, we may proceed to measurement. Having got the idea of a proportion of lines, we next pass to areas, including the idea of the duplicate proportion and the geometric mean. All this can be done without using figures or numbers. When the conception is well implanted, then proceed to numbers.

In connection with proportion would come geometrical representation of all the quantities which enter into arithmetical problems. Take as an example questions in day's work in plowing a field. We draw a short vertical line to represent a man or his power. On this line as a base we draw a horizontal rectangle to represent the amount of land which the one man can plow in a day of ten hours. If we have several men, we add into one the lines representing them, and combine all the rectangles into one. Then we extend these rectangles to represent the days. To introduce the idea of compound proportion, we suppose the results of a day of eight hours by making a rectangle shorter in proportion. I consider any problem in compound proportion solved when, and only when, the pupil is able to represent it graphically on this system. I am sure this process would be more interesting than the use of figures.

The precise purpose of this course in visible arithmetic is so far from familiar that further enforcement of it may be necessary to its complete apprehension. It must be especially understood that exercises in formal reasoning do not enter into the plan. A power of visualization and of giving

a concrete embodiment to the abstract ideas is the fundamental point aimed at. If I should express the desire to have a pupil trained from the beginning in the mode of thought of the professional mathematician, I might meet the reply that this was expecting too much of the childish mind. Allow me, therefore, to put the requirement into a slightly different form. I wish the pupil trained from the beginning in the use of those helps to thought which the advanced mathematician finds necessary to his conception of the relations of quantities. If a mathematician has no clear conception of an abstract quantity, how can we expect a child to have it? The mathematician expresses quantities by geometrical forms and the movements of imaginary visible points. Let us, then, train the child to represent the simple quantities with which he deals by simple auxiliaries of the same kind, adapted to the state of his mind and to his special problems. What I wish him to use is not merely a tool, but a necessary help to thought. The visible arithmetic which I advocate bears the same relation to ordinary arithmetic that the geometric construction of complex variables does to the algebra of the mathematician.

Altho I have spoken of these graphic constructions as merely an auxiliary, I would, after denominate numbers are disposed of, be satisfied with the graphic representation of all solutions required. After this point I would require very little mathematical solution of problems, being satisfied when the pupil is able to construct a graphic representation of the solution. When he can draw proportional lines, explain discount by cutting off and adding fractions of a line to the line itself, and in general show that he can form a clear conception of the practical problems of arithmetic, I should consider that he knew enough about it, so far as the mere numbers are concerned. Everything beyond this should be treated by algebraic methods.

Thus far I have treated of only one main object of arithmetical teaching. But there is another purpose of a different kind, and that is facility in the use of numbers. The pupils must not only know the meaning of multiplication and division, and understand when each is required, but he must be able to cipher rapidly and correctly. My views of the best method of attaining this end are perhaps even more radical than those I have already set forth. I think it can best be gained by short and frequent daily practice in the routine operations of the four fundamental rules, quite apart from the solution of problems. I would have something analogous to a daily five-minute run in the open air. The reiteration of simple problems, after the pupil sees clearly how to conceive them, is a waste of time. But this is not so with exercises designed to secure facility. Leaving details to the teacher, I would outline some such plan as the following:

Let an entire class devote a few minutes every morning either to reading or repeating aloud in chorus the addition, subtraction, or multiplication tables, until it is ascertained that the large majority of the class has them well by heart. I should not make it a point to have them repeat the tables from

memory alone, because I think the result is equally well attained by simply reading aloud. Another exercise would be that of adding columns of figures, following the method of the bank clerk or of the astronomical computer. It would facilitate this to have the exercise printed on sheets beforehand. Twelve lines of figures would be a good number. The earlier exercises may begin with three in a line; when these are easily done, add a column of thousands, then the tens of thousands, and so on. Do the same thing with exercises in multiplication and division.

These may seem rather dull exercises, but we can easily add an element of interest by choosing some condiment of which a very little will suffice to flavor an otherwise long and tedious course. The mere act of repeating in chorus will give interest to the exercises. In addition an element of interest will be given by noting from day to day the gradually diminishing time in which each pupil can complete his exercise and prove its correctness.

Thus far I have spoken only of methods of teaching. But I believe that, if the system which I advocate is intelligently pursued, it will be found practicable to curtail greatly the time spent in simple arithmetic, and thus rearrange the curriculum with the view of disposing of the subject of arithmetic, and passing on to algebraic and geometric methods, at a much earlier age than at present. In this connection attention may be invited to the report of the Committee of Ten, made in 1892, in which important changes in this direction were proposed. It must be admitted that in making such changes we shall be running counter to the ideas of the general public. When it is proposed to omit commercial and so-called advanced arithmetic from the school course, the reply is likely to be that we are considering only the requirements of pupils preparing for a college course; and that business and commercial arithmetic is a prime necessity with the masses. There being in our country no body of men more influential than that here assembled in wisely directing public opinion on this subject, I beg leave to point out the fallacy in this plausible view. The experience of directors in our great enterprises shows that the best business mathematician is not the one who has taken a course in commercial arithmetic, but who has the best understanding of numbers and quantity in general, obtained by the more advanced course of a mathematical character. A problem of practical business is best taken up by one who understands it. On the purely practical side, that understanding can be better gained in one day by actual experience than by any amount of arithmetic in a course subject to all the drawbacks of being treated as an abstraction.

I once saw an interesting example of this. It was in connection with a building association on an old-fashioned plan, which, I fear, has gone out of vogue. It was a mutual-benefit association in which accumulating results of monthly payments thru a term of years were to be equitably divided month by month among the members desiring advances. The mathematical principles involved, if investigated in detail, were so complex that only a professed

mathematician would be able to construct or apprehend their theory. Yet, when the problem was faced as an actual one, the whole process was gone thru with by everyday business men and laborers without the slightest difficulty. Not one of these could have explained the process to a learner, but he went thru each step correctly when the concrete problem was before him.

We should also try to dispel the current notion that the use of algebraic symbols belongs to a more advanced stage of study than arithmetic. We have advanced a little in the right direction since the time when the signs + and − were considered as belonging only to algebra, and therefore were not used in arithmetic. If my contentions are well grounded, the application of algebraic methods may be commenced as an auxiliary to arithmetic at a much earlier stage in the course than at present. In connection with the graphic construction of problems which I have suggested may come their solution in the form of an algebraic expression. If this seems too much to expect from the young mind, I think that impression will disappear on closely looking into the case. Let us grapple with the subject by taking it up as it really is. What will 13 pounds of tea cost at 55 cents a pound? Before the arithmetical solution can be begun, the pupil must understand that the cost is equal to the product of 55 cents into 13. It follows that, if he sees this, he can write on his slate as the answer 13×55. If a given sum of money is to be equally divided among 11 people, what will be the share of each? The answer is to be found by dividing by 11. If the pupil knows this, he can write a fraction, with the sum to be divided as the numerator and 11 as the denominator, more easily than he can perform the division. It follows that by the combination of the two problems he can express the result of dividing the price of the tea among 11 persons. The same thing holds true in all the problems of arithmetic, after the first four rules are disposed of. Not only will no greater difficulty be encountered in expressing the solution in this way than in performing it, but, since the idea to be expressed must be in the mind before the arithmetical solution is commenced, it will be a help to express the result in what we call the algebraic form.

We shall also find that the use of algebraic symbols of quantity is much simpler than is commonly supposed. If we have four x's, it is simpler to call their sum $4x$ than to call it x multiplied by 4. This suggests the idea, which I think is correct, that it is simpler and more natural to consider the figures 6 and 7 together to mean 6 multiplied by 7 than to have it mean, as we actually do, sixty-seven, which latter means 6 multiplied by 10 plus 7. Granting this, the expression of simple arithmetical problems in the form of equations will be easy, and I should suppose more interesting and more improving than requiring the pupil to work at the solution without using algebraic processes. It goes without saying that this use of algebraic methods in elementary problems does not imply the manipulation of algebraic expressions, including their factoring and division, which forms so prominent a feature of the usual elementary course in algebra.

Having suggested all these innovations, allow me to sum up in briefest compass the practical conclusions which I draw from a survey of the field.

I. I do not propose that we shall train a pupil in abstract mathematical reasoning until he reaches the stage where pure geometry can be advantageously taken up. But, from the very beginning, he should be trained in the faculty of mental insight. This can be done by problems like this, to be answered by thought without making a drawing. Of three houses, A, B, and C, B is 100 meters north of A, and C is 100 meters west of B. What is the direction of C from A, and about what would you suppose its distance to be?

II. I regard time spent in the schoolroom poring over problems and trying, perhaps vainly, to see how they are solved, as time wasted. Much waste in this way is indeed unavoidable; but our policy should be to reduce it to a minimum by explaining the problem whenever the pupil does not readily see into it for himself.

III. Of course, we should train the mind in seeing how to attack a problem. The objection may be made that whenever we help the pupil in this respect, we diminish his power of helping himself. I admit this to a certain extent; but my solution is that we should devise such problems that the course of thought they require can be seen without spending time in vain efforts. Please let me cite once more the analogy to outdoor exercise. We should all agree that, if we coupled the exercise of taking an outdoor run with the requirement of finding out at every few steps what path was to be followed, and put an end to the exercise if this right path could not be found, it would materially detract from the good of the exercise. Let us, then, in our exercises try to promote facility of calculation by exercising the pupil in purely straightahead work, without requiring him to stop and think what is to be done next.

IV. I have found in my own experience that words are as well and more easily memorized by repeated reading than by the same amount of repetition from memory. If this principle is correct, then we never lose anything by having the multiplication table before the pupil every time he repeats it, so that he shall read instead of memorizing it. I do not present this view as a demonstrated fact, but as one well worthy of being tested.

V. The plausible system of learning one thing thoroly before proceeding to another, and taking things up in their logical order, should be abandoned. Let us train the pupil as rapidly as is advantageous in the higher forms of thought, and never be afraid of his having a little smattering of advance subjects before they are reached in the regular course. Let us remember that thoroness of understanding is a slow growth, in which unconscious cerebration plays an important part, and leave it to be slowly acquired. A teacher aiming at thoroness might have kept Cayley or Sylvester working half his life in problems of advanced arithmetic without reaching the standard of thoroness. Let us rather promote the development of higher methods in the earlier

stages by introducing algebraic operations immediately after the four fundamental rules.

VI. Separate the actual exercises for acquiring facility in arithmetical operations from the solving of arithmetical probl ms. If I am right, it will be more conducive to progress to be satisfied with the graphic representations of problems, without the arithmetical operations of solution, than by actually going over the solution itself.

VII. If I am not straying too wide from my theme, I may devote one moment to the extension of the ideas I have advocated to the mensurational side of geometry and physics. As a part of the arithmetical course let us teach geometrical conceptions, the aim being a correct apprehension of lines, lengths, angles, areas, and volumes, as they actually exist in the objects around us, and are to be conceived in thought when these objects are out of sight. Valuable exercises in this repect will be endeavors to estimate a result in advance of calculating it. If a freight car is the subject of measurement, either in thought or by a picture, let the pupils form the best judgment they can as to the number of cubic meters or the tons of water the car will hold, before making the computation. Practice in estimating length and angles by the eye, and, in fact, in estimating magnitudes generally, should be a part of the elementary course.

I conclude with some thoughts on what is, after all, the great question involved. What are we to expect from the introduction of such a system as I have outlined, and how far shall it be carried? On ground which is, so far as my knowledge extends, as new as this, it would be hazardous to reach a decided conclusion in advance of trial. Here again the difficulty arises that a really decisive trial must be guided by clear apprehension of the purpose in view, which may essentially differ from that with which arithmetic is generally taught. Suitable exercises must be constructed; and this cannot be done until their purpose is fully seen. If I should express the hope that, thru the proposed system, the average boy of ten might be as well qualified to begin algebra as he is at the standard age of, I believe, thirteen or fourteen, I should not be interpreted as meaning that the mathematical faculty would be as well developed in one case as in the other. As I have already pointed out, development of the mind is a slow growth. The expectation would therefore not merely be an acceleration of the mental growth, but a development of the faculty of using powers which may be awakened at an age earlier than is commonly supposed. I may make this clear by referring to the fact, already pointed out, that a language is so easily and rapidly acquired by the natural process, when the acquisition would be slow and difficult by the process of teaching. If we could imagine a child ten years old who had been taught to speak only by rule and grammar, learning first nouns and then verbs, and compare him with one seven years old who was without theoretical instruction, but had learned to talk in the usual way, we might perhaps find that the older boy was better developed, had a much better theoretical

understanding of words and their meaning than the younger would have. But the younger would be far ahead in the facility with which he could use language, and apply what he knew in promoting his further intellectual advancement. Something like this I should expect from instruction and practice in visible and graphic arithmetic.

Of course, it should always be understood that the process must begin by being a tentative one, applied step by step. I therefore earnestly hope that some teacher will prepare, and some publisher be willing to bring out, a series of exercises of the kind I have described, to be tried on a small scale at first, and expanded as far as found successful in results. I certainly cannot conceive that the time spent in a few such trials would prove to be thrown away, even if the results did not come up to expectation.

This is my first and, perhaps, my last appearance before a body of eminent educators. While I fear that the possibilities I see before me may seem to be the ideas of an enthusiast, I trust that careful thought and experience will lessen the impression. I therefore make bold to say that it seems to me quite within the power of education to make as great a revolution in the intellectual powers of the masses of our population as science has made in the powers of the few thinkers who pursue it. The scientific investigator has been aptly described as a new species of the human race; a species so rare that it might well be considered an abnormal one. This species made its first appearance only four centuries ago, yet, it has revolutionized the conditions which surround humanity. I think it is possible that a similar revolution may be brought about in the intellectual power of the masses to judge of and grapple with the great social questions that confront them. I see in imagination a great nation the millions of whose citizens shall each have clear conceptions of the nature and causes of the natural phenomena presented to him at every turn; such an application of the forces which move both himself and his fellow-citizens that no unwise law can be enacted; such understanding of financial problems that the public of which he is a part shall be quite secure against becoming the victim of rapacity; and such training of the reasoning faculty that the masses shall never be moved to action except by sound reasoning, the force of which they shall be able correctly to judge. This end is not to be attained without many trials, and perhaps many failures in experiment. But every trial, whether a failure or a success, must be intelligently discussed. In all our discussions the end aimed at must be kept constantly in view. We do not propose to form a nation every citizen of which shall be a learned man, or even a well-read man; but it is necessary that every citizen shall become a careful and correct observer of all that he sees in his daily life, and so good a reasoner, that, however unable he may be to trace out the more difficult problems of life, he shall at least be able to analyze his own modes of reasoning, and thus be secure against the acceptance of fallacious conclusions. This end will never be gained so long as we regard correct observation and correct reasoning as subjects for the college and university alone, to be taken up at

stated times in a course of education. I therefore hope that the thoughts I have ventured to submit to your courteous consideration will not be applied to mathematical development alone, but to the mental training of the masses in an enlarged sphere of intellectual activity.

DISCUSSION

ROBERT J. ALEY, professor of mathematics, University of Indiana, Bloomington, Ind.—The address of Professor Newcomb is so good that it is unnecessary to praise it, and it touches the vital points so deeply that it seems almost presumptuous to undertake to discuss it.

One of the points made emphatic by Dr. Newcomb is the necessity of frequent repetition in a variety of ways of the things of fundamental importance in the subject taught. I urge this in justification of my own repetition of a few things which I regard as of great value.

It is a trite, but true, saying that to teach any subject well, one must fully understand its nature. Arithmetic, like most other subjects, is dual in character. There is a *pure* arithmetic and an *applied* arithmetic; a *theoretical* arithmetic and a *practical* arithmetic. A very common mistake is the attempt to master the practical without an adequate understanding of the theoretical. In this intensely practical age many people have been misled. Schools almost without number flaunt their advertisements in our faces, promising to prepare men and women for the highly paid practical positions in life in from ten to twenty weeks. An occasional millionaire goes into print and tells the worshiping public that time spent in studying the foundations of things is worse than lost. What is needed is a little study in the practical affairs of life. Our millionaire friend doubts the need of much school time devoted even to practical affairs. His advice is: "Get into the thick of the fight as early as possible." He points to himself with much pride, as the man who has *learned to do by doing*.

It surely requires but little argument to convince thinking people that the best practice the world knows always rests upon a sane theoretical basis.

The great bridge that spans the river out yonder was a theoretical bridge, a pure structure if you please, with the strain and stress computed for every part of it, long before it stood there a concrete embodiment in stone and steel and cement. It stands there today a monument of strength and utility, because it first stood a completed theoretical structure within the brain of the engineer who planned it. The attempt to build the practical bridge independent of theoretical considerations has usually resulted in disaster.

The technical school, that school that is supposed to be intensely practical, is everywhere increasing the amount of time devoted to theory. It is doing this because it has found in its own experience that practice alone does not prepare one to meet the varying conditions of life. The engineer whose sole preparation for bridge building has been the construction of a bridge crossing a stream at right angles, and of another bridge crossing at an angle of 30°, is generally powerless to construct a bridge which must cross at an angle of 23½°, or on a curve. But the engineer whose preparation has been very largely a study of the general principles of bridge-building is able to meet all sorts of conditions, and to build structures involving new or improved principles.

In the normal schools of a generation ago much more time was given to practice than is the case today. Experience has taught the normal school that practice, to be fruitful, must be intelligent, and that it can be intelligent only by resting upon sane theory. As a result, much time is now given to the study of the principles of general and special method.

"Arithmetic is the science of numbers and the art of computing by them." No better definition has been made. It emphasizes the pure or theoretical nature of the subject. When this science is taken out into the affairs of life and made to answer questions in experience, it becomes applied or practical arithmetic. Pure arithmetic might exist in all its completeness without ever being applied to a single practical purpose. Practical arithmetic could not exist for a moment without the principles of the pure science. Pure arithmetic is the tool that does much of the quantitative work of the world. For this work to be done well, it is necessary that the tool be thoroly mastered.

The most fundamental thing in arithmetic is number, for it is in number that the science itself is found. The number-idea is universal. The organization of number-ideas into a system by means of scientific grouping is also universal. All people, however meager their number-notions, have arranged these ideas scientifically about some elementary group. In most cases that group has been *ten*. Thoro acquaintance with the number system can be obtained in but one way—by counting.

Counting is, therefore, the most fundamentally important thing for the beginner in arithmetic. Counting at first is necessarily concrete; that is, counting is a form of quantitating material things. Perhaps at a very early stage of counting it may be advisable to have the objects counted essentially alike; but experience teaches that this necessity, if it exists at all, is very temporary. The child soon feels that number is a quality apart from size, shape, color, or any other physical property. From this, the step to abstract counting is very short. Indeed, but few of us can remember back to the time when objects were necessary in our counting.

There is something in the rhythm and swing of counting that is especially pleasing to the child's mind. It is a rare child, indeed, that does not enjoy it.

It is through counting that the fundamental facts of numbers are fixed in the mind. We know that 37 is more than 34, not by visualizing the two numbers, but because in our counting 37 comes after 34. All the basal facts of the fundamental operations in arithmetic are established by counting. The commutative, associative, and distributive laws, as well as the tables of the *four rules*, are all established by this means.

Since counting is of such great importance, since it delights and interests the child, and since it requires but little time and no apparatus, it should certainly take a large place in the number work of the first three or four years.

This counting should be by 1's, 2's, 3's, 4's, 5's, 6's, 7's, 8's, 9's, and 10's, both forward and backward, and involve every possible order. Such counting insures a complete mastery of all the addition and subtraction tables the world knows. It also insures the fixing in the mind of all the multiplication-table products.

Counting is not the only number exercise for the elementary school. It is an important one, but with it there should go the formal development of the *four rules*. Of course, much of this must necessarily be enforced by application to concrete things within the familiar experience of the child.

The development of the processes of addition, subtraction, multiplication, and division, and their extension into the special fields of factors, fractions, multiples, powers, and single roots, cover the ordinary field of pure arithmetic.

This development should be thoro enough to establish clearly the principles of the various operations and the interrelations between them. The inverse relations between addition and subtraction, and multiplication and division, are so simple that children of the second and third grades can understand and appreciate them. These relations are capable of clear and interesting concrete illustrations, and also lend themselves to easy graphical representation. They should be taught so thoroly that their simple application would give no trouble whatever.

Accuracy and reasonable speed are two most desirable ends in elementary arithmetic. Arithmetic lends itself more readily to the training in accuracy than any other common-

school subject. In arithmetical calculations the results are right or wrong. The calculator himself, without much trouble, can usually determine the accuracy of his results. In no other subject can he do this with the same facility as in arithmetic.

Many pupils leave our schools without any just appreciation of the value of accuracy, and without ever getting out of the spelling stage of calculation. Both of these conditions are deplorable, easily explained, and curable. Arithmetic as a tool is almost useless unless it has an edge keen enough to do its work with considerable speed and absolute accuracy. The lack of speed is due to inadequate training in counting, and to insufficient drill upon the simple combinations that make the tables of the *four rules*. Another thing contributing to slow work is the very common practice of having pupils deal with concrete problems, involving complex reasoning, before they understand the pure arithmetic. Speed is attained by dealing with things so simple that practically all the attention can be given to the speed itself.

The woeful lack of accuracy is due wholly to the attitude of the teachers. Teachers permit and sometimes encourage inaccuracy. If the process of solution is right, the pupil is praised, even tho his answer may be utterly and absurdly wrong. Until a few years ago the State Board of Education in Indiana instructed the examiners of applicants for license to teach, to mark the papers in arithmetic upon the basis of one-half for process and one-half for answer. For the past half-dozen years the instructions have been to mark the arithmetic papers by the absolute standard of accuracy. The first plan developed slovenly habits in the teachers, and gave us a generation of graduates from our common schools that could not be trusted to add a grocery bill. The second plan convinced the teachers of the state that the habit of accuracy is an asset worth having. Their only chance of getting even was to pass the absolute standard on to their pupils. They have done this. The result is that the pupils today in Indiana have an appreciation of the value and desirability of accuracy not dreamed of by their predecessors of ten years ago. Pupils soon form the habit of accuracy when they find that inaccurate results are uniformly marked zero.

Accuracy, speed, and understanding of the principles of pure arithmetic are best attained by centering attention upon these things, rather than by attempting to accomplish them thru complicated applications to concrete affairs. In multiplication by 2, after the table has been learned, more desirable results in speed, accuracy, and understanding are obtained by multiplying large numbers by 2 than by often repeated little multiplications. The multiplication of a number of twenty figures by 2 has all the merits found in the multiplication of twenty single digits by 2, plus the chance for speed, the drill in carrying, and the enormous impetus given to the child in the idea that he is doing something big. The purpose of this work is to learn to multiply, and with it to attain to speed and accuracy. The same is true of work with large numbers in the other operations.

Speed, accuracy, and understanding are all greatly helped by the early teaching of contracted methods and short-cuts. Many persons think that the immature mind is unable to grasp short, direct methods. Nothing is farther from the truth. No one more readily grasps, or more highly appreciates, masterly ways of doing things than a child. Much of the arithmetic-teaching of today puts a premium on the long-drawn-out way of doing things. In many schools the solution is best which covers the greatest number of square feet of blackboard or square inches of notebook. This is all wrong. The teaching should face about and develop mental alertness that will go to the heart of things and get results in the most direct way possible.

I have tried to emphasize two of the many important points made by Dr. Newcomb.

1. The necessity of a clearer understanding of the principles of pure arithmetic. This may be attained by giving more attention to the relations of number thru counting and thru a deeper study of the relations in the *four rules*.

2. The desirability of better results in speed and accuracy. These may be attained by much drill, by the use of direct methods, and by the teacher maintaining an absolute standard of accuracy.

SUGGESTIONS FOR THE IMPROVEMENT OF THE STUDY PERIOD

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Last spring I took charge of a fifth-year class of twenty children in history and geography, with the object of investigating and, if possible, improving their method of study. After spending perhaps sixty minutes with them, I assigned one day a paragraph of map questions which they were to dispose of in class, *without help*. I was to do nothing more than to call upon someone now and then to "go on," or to "do what ought to be done next."

A girl read the first question: "Here is a relief map of the continent on which we live. What great highland do you find in the west? In the east?" Then she stood silent, staring at the book. She might have inquired the meaning of "relief;" or have turned to the relief map opposite—which was small; or to the better map two pages further over; or to the wall map hanging, rolled up, in front of the class. But, altho she was not embarrassed, she did nothing. She was waiting to be directed just what to do, and she waited until aid arrived from me.

In response to the next question, "In what direction does each (highland) extend?" the two great highlands, the Rockies and the Appalachians, were described as parallel; and the pupil was passing to the next question without objections from any source. Again I had to interfere.

"Which is the broader and higher?" was the third question. A boy stepped to the wall map and pointed out the Rockies. But, as no one asked why they were supposed to be broader and higher, I suggested that question myself. Someone gave the correct reason for considering them the broader. But, by that time, the entire class had forgotten that there was a second part to the question, and were passing on. I then reminded them of the omitted part.

The fourth question called for the location of the lowest land between these two highlands. Four or five stepped to the board in succession, showing wide disagreement. Yet no one asked anyone why, or proposed any way of settling the dispute, or even evinced any responsibility for finding one. They would have taken the next question, had I not objected.

"Trace the Mississippi River," was the fifth question. Only about one-half of it was pointed out—i. e., from Cairo southward. But no one entered complaint, and the next question was read before I requested more accurate work.

The girl who read the next direction—i. e., "Name some of its largest

tributaries"—stood silent. The word "tributaries" was probably new; but she apparently lacked the force to request help. As nearly as I could judge, she was waiting for me to ask her if she didn't need to ask someone for the definition. So I complied, and the definition was given.

Then all failed, for a time, to answer the original question, apparently because they could not break it into its two parts, first tracing the principal tributaries on the map, then finding the names attached to them.

These responses are representative of my earlier experience with these ten-to-twelve-year-old children. In spite of the fact that they were not frightened, and plainly understood that they were to go anywhere in the room, and do or say anything that was necessary, frequently someone stood ten to fifteen feet from the wall map, straining his eyes to read it, until invited to step forward. And even after answering the single question that was assigned to each during a portion of the time, they often remained standing at their seats, or holding a pointer before the map until directed to sit. They seemed to be wanting in energy to move about freely, to determine when answers were correct and complete, and even to lay aside the pointer and sit down, without assistance.

Yet they were normal children, were up to grade, and had even enjoyed rare school advantages. Nine out of the twenty had attended this school—the Practice Department of Teachers College—from the beginning, and every one of the five teachers that they had had, had been a graduate of a state normal school or of a college; or both, and had been especially trained for teaching. How, then, can their failure to master such a simple lesson as map questions be explained?

The explanation, I think, is found in the peculiar difficulties of studying alone; for I was almost requiring them to get their lesson without the aid of a teacher. Let us consider those difficulties.

When a pupil studies a lesson with a teacher, it is a question of how much two persons can accomplish together, the one being immature, and only under favorable circumstances fully willing to receive and be guided; while the other is much better informed in general, more or less versed in the principles of presentation, and more or less skilled in their application.

In the mastery of text together, the teacher asks questions, pushes the pupil against difficulties, points out crucial thoughts, calls a halt here and there for review and drill, furnishes motive by praising or reprimanding or pummeling, as the case requires, and not seldom grows red in the face from exertion.

Likewise, in the case of developing instruction, the teacher chooses the general topic, breaks it into parts, and then concentrates her ability on her questions, endeavoring to have them short, simple, and attractive enough to make sure bait. And if she is very skillful, her predigested morsels of knowledge may be swallowed and assimilated without pain or conscious effort.

In both cases the teacher is the acknowledged leader. It is she who takes the initiative in determining how the lesson shall be attacked; who exercises resourcefulness in meeting unexpected obstacles; who assumes responsibility for deciding what the crucial questions are, and when the answers are right and complete, and who supplies the energy that makes things go. If she is accounted a good teacher, she is fully as active as her pupils, and probably grows tired first; she is the one who does the work.

Now, eliminate the teacher, and let the pupil attempt to get his lesson alone. It is no longer a question of how much two persons can accomplish together, but how much the weaker of the two can and will do alone.

The work to be accomplished is the same, however, as before—i. e., the assimilation of the topic by the pupil. The means, then, must be substantially the same—i. e., a careful division of the subject into parts, and the putting and answering of questions touching the meaning, relative values, organization, and bearing on life. Therefore, what the two accomplished before—with the more capable one working the harder and doing the greater part—must now be performed by the weaker one alone. He must now duplicate the teacher's task by teaching himself. How different the two situations!

Here is the explanation of the failure of the class mentioned, in spite of the fact that they were fairly endowed and responsive children, and this was their fifth year of superior instruction. For nearly five years they had been establishing the habit of waiting to be told when to step to the board, when to lay aside the pointer, what questions to consider, when an answer was wrong, when something had been overlooked or forgotten, and when they were thru with a task. They were strong as followers, as would quickly have been proved if I had been willing to play the customary part of leader. But they were untrained for such leadership of themselves as is necessary in study, because they had not been learning to take the initiative, carry responsibility, exercise resourcefulness, and find motive for effort, by having someone else perform these duties for them. Indeed, such help from a teacher as is customary undermines self-reliance and unfits for independent study, altho it may and often does result in a good fund of knowledge.

This class, I think, is typical of others. The first change, therefore, for the improvement of study periods must be effected within the recitation itself. That period must accustom children to taking the initiative in the mastery of thought. Outside of school—as in games and conversation—they do this constantly, and always have done it; it is in the school, the special institution for education, where it is wanting. When instructing a fourth-year class in literature one day, I suddenly inquired: "Do you ever stop to talk over what you read?" "No," replied several. "Yes," said a few, "sometimes we do." "All right," said I to the latter. "Let us stop here and talk a few minutes. Eddie, what have you to say?" "O, we don't talk; the teacher does the

talking," remarked Eddie, with a most nonchalant air. How typical of the school! And how lamentable!

To secure this initiative from children, radical reform in the conduct of recitations is necessary in two respects. First, there must be an ability on the part of teachers to keep still more of the time. The teacher is too prominent in the class. And, strange to say, in development work—which seems to be regarded as our highest type of instruction—she is most prominent. One great object of a good teacher should be to show children how to get along without her; and the longer she keeps a class, the less talking and other work she should do, because under her guidance they have learned to do it themselves. How otherwise can they be improving in power to study alone? Second, initiative on the part of the pupils in the mastery of lessons must take the place of knowledge of subject-matter as the primary object of many recitations. It is well enough to recite to a teacher a portion of the time, in order to prove one's possession of facts. But reciting does not usually reveal one's way of getting the facts; it merely tests results. And it is partly because so much time has been occupied in reciting that so little attention has been given to children's method of study. Many recitations—possibly most of them in the elementary school—should be spent by the children in mastering lessons in the teacher's presence, with the aid of her suggestions—not primarily for increase in knowledge, but for increase in intelligence and independence in study. This change of aim might make it advisable to call the periods in general "study periods," rather than "recitation periods"—there is so much that is reprehensible in the latter name. Children would probably know as much in the end—but they would also have far better methods of working.

Now, what are the facts about method of study whose mastery demands so much time? Teachers may be willing to practice silence in class, and to accept initiative on the part of pupils as their primary aim; but until children are very clear in regard to the directions in which initiative is to be exercised, they are likely themselves to be provokingly silent. This problem, touching the principal factors in proper study, is one of the greatest that now confront the teacher.

Both children and college students generally recognize two main factors in study—i. e., memorizing and thinking. And which of these should come first is the first important question to be met. Custom says, "memorizing." "Fix the facts or thoughts in memory, then reflection upon them can follow at leisure," is the common thought. But there are always more duties in life than time allows us to perform, so that reflection is habitually postponed until it is omitted. In consequence, to the great majority of persons, studying signifies mainly the stultifying work of memorizing. Suppose, now, this order were inverted, and young people were taught to undertake the first thing whatever thinking was expected of them in each lesson. They would then at least make sure of the more interesting part. But, more than that, thinking thoughts thru, in the various ways required in good study, is the very

best method of memorizing them, and psychologists recommend this method even in the case of verbatim memoriter work. Conscious effort to memorize would then be largely or wholly unnecessary, because the memorizing would become a by-product of thinking instead of a substitute for it. Here is the first great fact to be taught to young people about how to study. And if it were applied, there would need to be less of dull drill in school; one reason for so much of it now is that there is so little thinking.

What kinds of thinking are to be expected is the next great question. The chief factors in reflection must be carefully taught. Let us very briefly suggest a few.

1. In the reproduction of stories by six-year-old children, teachers affect to make the response easy by mentioning definite points to tell about. Children in the second and third years of school easily detect the substance of scoldings received, of conversations, and of paragraphs in their readers, and they determine the substance of paragraphs for short compositions. In development work thruout the primary they are reasonably successful in comprehending the question under consideration, and in holding to the point as the discussion advances. Here there are the beginnings of the ability to group facts into points, or to think by points. This is one of the first requisites for the organization of knowledge, but the extent to which it is lacking in adults is suggested by the tendency of teachers to offer scattered or isolated facts in the studies, and to wander from the point in their conferences. This ability, then, needs to be highly valued and developed. Lessons should often be assigned, or at least recited, by points rather than by pages. Marginal headings should be prepared by children, and they should learn to put their fingers on the spots in the text where the treatment of a certain point begins and ends, thus determining the places where the thought turns, and where pauses might be suitable, for reflection. Also they should verify and improve the paragraphing of the text; should assume responsibility for detecting beginning wanderings of thought in discussion or in text; should receive practice in taking notes, by points, when the teacher reads or talks to them; and should learn so to group their ideas that they could easily number the points that they themselves make, in reciting or in writing.

2. Children somewhat easily detect the main points in a story; they often recognize trivial facts as such in development work; they are keen critics of the value of words in comparison with deeds in the conduct of their teachers and parents; and they are often distinguished for their good sense in their judgment of relative values, just as adults are. Here are the beginnings of a second mental ability of vital worth in study; and it is all the more important that it be developed, since the facts in the three R's and spelling are so nearly on a dead level, and the prevailing conception of thoroness so magnifies trifles, that the appreciation of relative worths is in peculiar danger of atrophy in the primary school.

Whole recitation periods might well be spent primarily in the cultivation

of this ability. To that end children might be encouraged to mark their texts, indicating the relative value of different passages by their system of markings. Reciting usually with their books open, in history or geography, as in literature, they should often be asked to begin with the largest thought in the entire lesson, no matter where it might be found; and, if disagreements are noted, the period might be spent in the attempts of various pupils to defend their estimates. They should practice putting large questions, as well as answering them, and should develop skill in selecting the details necessary to the support of a large thought thereby learning to slight insignificant facts. If they are not allowed to mark up their books, how are they to review them without loss of time? And if they do not learn to neglect much of what is in a text, how are they to learn that wise selection of facts which will allow them to make profitable use of reference-books, newspapers, and magazines?

3. Children have such vivid imaginations that they are capable of becoming frightened by their own pictures. When they become interested in a story, it is difficult, even in the kindergarten, to check their expression of suggested ideas; conversations among them are as natural as among adults; developing instruction is based on the assumption that their experiences are rich enough to allow contributions of thought, and fables, calling for interpretation, are especially written for them. Here, then, are the beginnings of a third ability of great importance in study—i. e., the power to supplement an author's thought. The best of authors fail to put most of their ideas into print. Or, as Ruskin declares, all literature—like the story of the Prodigal Son—appears practically in the form of parables, requiring much supplementing to be properly pictured and interpreted. The words in a minister's text in comparison with those in his sermon are perhaps as one to one hundred. The statements in any text should bear a somewhat similar ratio to the thoughts that they suggest in the reader's mind. Accordingly, much time should be occupied by children in school in visualizing in greater detail the scenes in geography, history, and other studies; the bearings of facts upon human life should often be traced out with care; and comparisons of many kinds should be instituted. To this end fact questions, testing mainly memory, are out of place; questions involving reflection should be common, if we desire young people to become reflective. And the initiative, it must be remembered, should come from the children. A very common remark from the teacher in the treatment of text might well be: "Do we need to stop here to talk over any matter?" The children should even learn to call a halt themselves, at fitting places, and to offer the supplemental thought without even a suggestion from the teacher. Thus they might be taught how to read books.

Want of time forbids my doing more than merely indicating a few other prominent factors in proper study, by means of questions.

Is it one's duty, in reading an author, to try to agree with him; or may one disagree, and thus set himself up as a judge? Even six-year-old children are allowed to praise fairy-tales that they like; have they the right of condemna-

tion also? I find many college students uncertain about this whole question.

Should a scholar aim at firmly fixed opinions? Or is it his duty to remain somewhat uncertain, and therefore flexible, in his views?

Again, how is a student to know when he properly knows a thing? Or is he expected to feel very uncertain until the examination returns are seen?

In mastering a lesson or reading a book, should one study primarily for the sake of understanding what is presented? Or primarily to meet the teacher's probable requirements? Or primarily for personal profit?

These are all questions of vital importance in study for all ages of students, And until they have been properly answered, and young people have been properly instructed in regard to them, home study will continue to be a bugbear, and complaints of teachers about pupils not knowing how to study will continue to be common. We have been on the right track in the past, when we have emphasized the need of careful directions in the assignment of lessons, so that children would know how to go to work. But we were ignorant of the magnitude of the difficulty involved. How to study is very different from how to teach, and even a broader question, I think. And we might as well expect to train persons to teach merely by giving them occasional suggestions about teaching, as to expect to train them to study by giving occasional suggestions about study. Therefore, my main proposition for improvement in study periods is that we begin to take the problem seriously, and go to work upon it. It involves more knowledge about how adults should study than is now easily attainable; it raises the question of the extent to which children can be expected to study; it favors radical reform in the conception of the class period —i. e., as a meeting time for the exchange and correction of ideas rather than as a time for reciting to a teacher; and it requires cultivation of initiative on the part of children to an extent that is now almost unknown.

MEANS OF IMPROVING THE EFFICIENCY OF THE GRAMMAR SCHOOL—ELIMINATIONS AND MODIFICATIONS IN THE COURSE OF STUDY

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The keynote of American public education is democracy. We proceed upon the theory that the school that is best is none too good for all. We have no special types of school for the different classes in the social order. Every child must pass thru the same educational evolution required of any child. Just how far the state should carry this system is as yet an unsettled question. That it should cover the periods of childhood and of youth is already assumed, and types of public schools, called primary and grammar and high schools, are everywhere accepted as part of the business of the state in education. These are evidences that this state support may yet include the college. Were it not for the fact that religion and private philanthropy have already entered upon

this higher education, doubtless the state would long since have taken this also under its support and supervision. It may yet do so, just as it has supplanted the private secondary school in the great centers of population.

No one questions the right of the state to provide an adequate system of education; for everywhere a complete system of elementary schools, in which is included that type of school called the grammar school, is now under state control and state support.

Child-labor laws in almost all the great states of the Union prohibit the employment of children under thirteen or fourteen years of age. Compulsory educational laws require attendance at school to the same period. But this period rightly figures the period of elementary education. It is thus seen that the theory of the state is that every child must attend the grammar school. Beyond this the state does not as yet assume to dictate to the home what education the child must receive.

It is significant, therefore, that the state expects and demands the presence of every child in the grammar school. It also virtually announces that this same grammar school is the highest type of universal education imposed by law upon the child. All secondary and higher education is optional. Grammar-school education is compulsory.

From the point of view of the state, then, it is fair to assume that the grammar school is unique, and, if for no other reason, should, perhaps under some more felicitous name, retain its integrity and individuality as such. Moreover, certain considerations arise from its unique character as thus defined.

In an illuminating address before this Association at its Atlanta meeting in 1904, Dr. Frank M. McMurry set up the criteria for testing the course of study in elementary and secondary schools. Before these standards he caused the detailed data of our curricula to pass. With wise discrimination he rejected the less worthful and retained the more essential elements of the materials with which to build the *real*—called content or knowledge in education. This work was so well done that no restatement of that phase of our problem is needed. Within the scope of that analysis fall the materials that should be used in the grammar school. I shall, therefore accept that statement as a satisfactory dictum relative to the materials of the grammar-school curriculum, and discuss only such additional means of improving the efficiency of the grammar school as seem significant.

Not all our ills are in the curriculum. Not all our reforms are to be achieved in recasting the quality or the amount of material to be used in the educational process. The course of study is not the only field of struggle upon which to win pedagogic triumphs. Education is not alone a process of informing the mind; it is a process of enriching the soul. It is more than filling the mind with useful facts, valuable as this may be; it is the cultivation of all the powers of the soul, the complete equipment of the individual for service. It thus includes, in addition to the informing of the mind, the forming of the mind. It has a culture aspect, as well as a knowledge aspect, and

it is quite conceivable that the educational process may be so directed by the teacher as to produce a minimum of culture with a maximum of knowledge. The reverse is also true. But the better teaching is that which lays emphasis upon the cultural, not the informational aspect of the teaching.

We cherish a fact as if it were a sacred thing. We neglect development of power as if it were an incidental thing. Even in the grammar school we are too much given to the worship of the things in the curriculum. We are intoxicated with the alluring wine of "education for practical life." We are not educated by the mere possession of facts. When these facts are secured at the cost of the physical ill-health or mental enervation or moral blight, we pay for the facts more than they are worth. There are thus three means of possible improvement in the efficiency of the grammar school: (1) increased concern for the physical well-being, (2) increased concern for the training of the powers of the mind; (3) increased culture of the moral qualities of the soul.

The physical well-being of the child in school is so important that it seems unnecessary to do more than refer to it. Good health is requisite to good living, to efficient service, and no school has the least justification for compelling a child to attend its sessions and providing no adequate care for his health.

The culture of the mental powers is of vastly more significance than the meager scraps of knowledge too frequently forced unrelatedly into memory. The function of the grammar school is to create in the pupil an appetite for more knowledge, not to fill him with masses of preselected data which some self-satisfied official has ordained to be the pupil's meat and drink. True, indeed, these facts of the curriculum do have value both for what they are and for what they may occasion. But the practical judgment of the school community will always prevent these from losing their place in the processes of educating the masses. We deplore the great loss of pupils in the grammar grades. We regret that so few of all that should and could enter the secondary school really do so. Is not the reason in part due to the sated appetite and the quenched thirst produced by wrong nutrition in the elementary school?

Of the need of the culture of the moral qualities, the translation of clear thought into efficient and sufficient action is confessedly the greatest aim of the school. Since "conduct is three-fourths of life," its achievement becomes the first office of the school. No school is efficient that fails to stimulate right conduct, set in the currents of the soul right habits, the issue of which is character. Not what one knows, but what one is, is the goal. To say it cannot be achieved is to confess the school a failure. To neglect its achievement is treason to the child and to the state. I do not mean to imply that these great issues are wholly neglected in our schools. I know they are not. But I am constrained to say that they should have vastly more conscious attention; that, in short, they should be viewed by the teacher, not as matters to be attained incidentally, but consciously and deliberately, with the same

care and concern that now is shown for the ordinary things of the course of study.

Perhaps in no one way may these ends be so economically and so wisely attained as thru such a reorganization of our procedure as will secure to the child less facts in the curriculum, and a vastly wider identification and relation of each new fact with all that has already found place in consciousness. Not more facts, but more relations for each fact, most surely promotes efficiency. This modification of the curriculum is everywhere needed.

We should always distinguish between clear knowing, which sees the thing and not some other thing in its stead, and distinct knowing, which sees the thing in all its relations to other things in the mind. Thus we rise from teaching that is content with perception, to teaching that carries the act of perception on to its fulfillment in the act of apperception. With a crowding of facts into consciousness there is left no time to relate these facts each to the other; and yet a perceived relation is usually a more essential element in learning than a perceived fact. A poor teacher may present facts to the mind; only a good teacher knows the more delicate and essential art of building relations in the mind.

Viewed, then, from its several aspects, the problem of efficiency seems to resolve itself into a problem of simplification. This simplification may be viewed from three aspects: (1) simplification by elimination; (2) simplification by enrichment of the materials of instruction; (3) simplification by enrichment of the teaching process.

These three methods of simplification are radically different. The first assumes that the materials of the curriculum in the grammar school are too great quantitatively to be mastered by the pupil. The second assumes that the amount is not too great, but that the materials are not wisely organized, and that there is a consequent waste of effort, which may be corrected by a recasting of the data used in the grammar school. The third assumes that the materials of the curriculum, as to both quantity and quality, are not so much in need of reorganization as is the teacher of the grammar school.

With the first of these Dr. McMurry has dealt adequately. With the second much is being done. There are yet other needed reforms. The attempt to secure a closer articulation between grammar school and secondary school, by adding to the curriculum of the former some language element or mathematical element, which was until lately held to be peculiarly and exclusively the materials of secondary schools, has done some good. We have not yet learned the whole significance of this, especially in the sphere of languages. Experience has forced me to believe that practically thru the grammar school two languages can be learned in the time given to one, and that each language will be more thoroly mastered by reason of the other. Here at least one may predict gain of knowledge and of discipline without increase of effort by the pupil. It may be well to ask whether a more vital articulation would not result if in some way we could overcome the great

crisis in a child's life when he is jumped in a moment, in the twinkling of an eye, from instruction under one teacher in the grammar school to departmental teaching in the secondary school. And in overcoming this irrational procedure at the very age when the tension of compulsory attendance is removed, let us not forget that the welfare of the many in the grammar school is of more moment to the state than the welfare of the relative few in the secondary school.

The third method of securing efficiency—by enrichment of the teaching process—is comparatively the most significant. In the last analysis, the teacher is the course of study. No mechanism can be devised that will in any adequate way compensate for the absence of a thoroly trained and widely informed teacher. And this teacher must be more than a scholar. He must understand the whole round of youth's activities, and enter heartily and sympathetically into all that the pupil rightfully should know, do, and be. He must be a superb teacher, whose presence and process alike challenge the pupil to his best efforts, and whose systematic training in the principles and methods of teaching dispose him to discipline as well as to inform the expanding powers of the soul. Such a teacher is the best enrichment the school may hope for, the best enrichment it can command.

HOW CAN THE SUPERVISING INFLUENCE OF GRAMMAR-SCHOOL PRINCIPALS BE IMPROVED?

LEWIS H. JONES, PRESIDENT OF STATE NORMAL COLLEGE, YPSILANTI, MICH.

The statement of my theme implies the feasibility of the organization of the agencies employed in public education into some unity of purpose, to the end that each of those agencies may have its individual efficiency increased, and that there may be a definite increase of the collective result. This possibility of the improvement of the agencies at work in the school is based upon a fundamental fact in human nature—namely, that there are large classes of people engaged in every vocation, in every province of human effort, who have not the training which enables them to transmute into valuable experience the life-occurrences in the midst of which they move and work; so there must be some means taken to develop in these people that alertness of mind which makes them sensitive to their surroundings, which brings to the forefront of their consciousness their entire past history and achievement, their complete set of mental possessions, so that these shall be the means of the interpretation of the circumstances in which they live and work. The entire situation is typified to my mind by an occurrence that took place some years ago. I am the owner of a little farm in the neighborhood of Indianapolis. In the early eighties, during two successive summers, I moved from Indianapolis to this farm, and drove back and forth to my teaching each

day. When on the farm I assisted somewhat during evenings and Saturdays in the work, and specifically I helped in both years in the planting of potatoes. An aged patriarch, living on the farm just across the road, seeing the young city farmer at work, came and climbed on the top rail of my fence, and discovered that I was planting potatoes in the light of the moon. He proceeded to show that potatoes so planted, in the light of the moon, would grow into foliage, but would not produce tubers; while those planted in the dark of the moon would produce large tubers and little foliage. I went ahead, however, and planted my potatoes in the light of the moon. I cultivated them carefully, and used paris green to save their ample foliage from the bugs. He planted his potatoes in the field just across the way in the dark of the moon; but he forgot to till them, and the bugs held riot on the few leaves that came above the ground. He did not even try to dig his potatoes, so poor was his crop; but when I had dug mine, I had more than I needed. I generously supplied his table with potatoes from my cellar. What surprised me was that the next spring, when the time came again to plant potatoes, that man, with the strength in him born from eating my potatoes which had been planted in the light of the moon, came across that same road, climbed that same fence, sat on the same top rail, and told me that same story; and said that during a long and useful life, devoted to piety, patriotism, and potatoes, he had never known his rule to fail. I give this as a sample of failure to learn from experience. We as teachers live daily in the midst of a set of facts which might become the inspiration of our lives in our chosen work, and from which we might learn how to correct our errors. In many cases, however, the effect is to deaden us to all helpful influences, so that each year of so-called experience makes us poorer teachers than before. Sometimes, when a candidate files with me the statement that he has had ten or fifteen years of experience, I say: "How sad! It almost precludes the possibility that you can grow into a good teacher, because the probability is that you have hardened yourself into habits that cannot be broken."

This whole theory of improving the teacher is based on our ability to get spiritual stimulus and professional help out of the ordinary occurrences of everyday life. The solution of the question, "How can the supervising influence of the grammar-school principals be improved?" depends upon three elements: the room-teacher, the building principal, and some supervising power that shall lead these two forces into effective co-operation. Some means must be found whereby the principal and the room-teacher can be made to co-operate in the direction of greater efficiency. It is the business of the superintendent to project the theory of this improvement and to assist in carrying it into execution. The very first thing that the superintendent must do in this connection is to lead the teacher himself or herself to desire to be a better teacher. All those outside or external inducements—such as the offer of promotion, the increase of salary, the choice of position—are each and all legitimate in their place. But none of them can take the place

of a desire to increase one's efficiency. I believe that it is just as necessary to teach the teacher to idealize the reals of her work as it is to ask her to attempt to realize the ideals of teaching. The greatest power that culture gives to a human being is the power to look an imperfect thing squarely in the face, and see with the mind's eye the perfect thing that should be in its place. Soon the interest of the teacher will center in the possibly perfect thing. The superintendent must begin by teaching the principals of the buildings how to deal with their teachers, and stimulate them to desire improvement in teaching for improvement's sake. The very first thought is that the principal and the teacher must work together in the schoolroom with the children. Of course, the principal should have an office for some phases of his work; but when he becomes chiefly an office-holder, his value as a supervisor is largely lost. The principal must go into the schoolroom, sharing responsibilities there, developing sympathies, measuring successes, detecting failures, and always eulogizing the best things found, criticising adversely as seldom as may be. The superintendent himself should often go with the principal, in this way criticising the work of the room. In this way must be developed a professional comradeship, for the improving of the efficiency of the schools thru the improving of the efficiency of the teacher; and this comradeship will grow eventually into a feeling of perfect confidence and sympathy, until, when principal and teacher meet to talk over the experiences of the day, there will be absolute freedom. It is impossible to develop the highest efficiency in a teaching force by cynical criticism. It must be done by stimulating the highest powers. There must be all the time developing in the mind of each teacher a growing ideal of what efficiency consists in, and all else must be subordinate to a desire for growth. The essence of the whole matter is developed in this comradeship in effort. A principal of a school building who cannot share the teaching work of the day with the room-teacher ought to fit himself for such supervision by practical teaching. Instead of having charge of some special subject or special grade, the principal should put himself into sympathy with all the teachers; until at last he shall be considered as a helper—one to whom the teacher can go for comfort in her struggles and help in her difficulties. Soon there will come a sense of growth, and that greatest reward that the teacher can have—namely, the feeling that all the agencies are working in harmony toward the increasing of the efficiency of all, and that all are working in harmony with the great Creator in the redemption of the world.

DISCUSSION

C. M. JORDAN, superintendent of schools, Minneapolis, Minn.—I have been asked to speak particularly of the seventh and eighth grades, and I feel impelled to say that, in my judgment, neither paper has touched the vital point as to improving the efficiency of these grades. The papers have gone upon the assumption, altho it has not been boldly stated, that the purpose of the grammar school is to fit pupils for the high school. I con-

tend that this is only part of its purpose, and the smallest part, and that its real purpose is to fit the pupil for life.

It is a fact without question that a large percentage of the boys and girls in the high schools of this country are not getting enough out of the high-school course to pay for the time and money which it is costing them and their parents. The first thing to do, then, is to fit the seventh and eighth grades to the demands of those pupils, as well as to the demands of those who will go forward into the high school. I feel that it is our duty, in these higher grades, to make the pupils acquainted, as far as possible, with the demands of life. I would say to the boy of these grades: "You may go to school in the morning and study the regular subjects of the curriculum; and at two o'clock in the afternoon you may return, and we will give you a thoro course in manual training." The reply at once is that such a course would not fit a boy properly for the high school. My answer would be to make the kind of a high school that such a boy will fit. I do not understand that boys are made for the high schools, but that the high schools are made for the boys. I often ask myself if it is not possible that the more system we have, the less true education we are giving the children.

I am not extremely particular about the course of study. There is not a man within the sound of my voice who has a course of study in his schools which he would select for his own children to follow.

What I want is what Dr. Brumbaugh demanded. I want the teacher. Especially for the seventh- and eighth-grade teacher I would rather have the reformed sinner than the plaster-of-Paris saint. I want a woman who knows something of life; who knows something of boys and girls; who knows the conditions into which they are going; and who knows the temptations against which they should be warned. I care little whether the teacher is a man or a woman. The question of sex does not trouble me in this particular. But I want the teacher. And when I have the right teacher, I want her to stay with the boys and girls long enough so that she can impress upon them her personality. I have often thought that it would be a wise plan to arrange a system of rotation for teachers —a system by which the first grade teacher could retain her pupils for two years, and then put them into the hands of another teacher who would retain them for two years, and so on thru the grammar-school course. Under the present arrangement, in most graded schools, the teacher is with the children so short a time that she hardly makes their acquaintance. The objection to this is at once suggested by the question: "Suppose you were to have a poor teacher?" The answer to that objection is obvious. How long would the people tolerate a poor teacher, if they understood that she was to remain with the children for two years? Many teachers are retained in the public schools today whose equipment and success are not what they should be, because of the difficulty of dismissing them, and because the parents feel that the children will not suffer materially by being in their rooms one term.

Give the boys and girls something to do, so that they can see there is some relation between school and life. Get the teacher who is in sympathy with the children. And many of the difficulties that trouble us of the upper grades will disappear.

C. N. KENDALL, superintendent of schools, Indianapolis, Ind.—Pupils in the grammar schools, near the beginning of the adolescent period, are at an age when they require teachers of strong personality. Is it generally advisable to place such pupils under the charge of a young woman just out of the normal school and with no experience in teaching?

We need more men teachers, of course, but we are not likely to get the right sort of men in the grammar schools unless greater inducements are held out. Greater care in the transfer—I do not like to say promotion—of teachers in primary schools to positions in grammar schools will make better grammar schools. The truth is not generally recognized that an effective teacher for the higher grammar schools is not so readily found as an effective teacher for second, third, and fourth grades. The age of the grammar-school

pupil is such that it is imperative that he shall have a teacher who shall really be "captain of his soul," as Dr. Hall has put it. A great waste is going on in some sixth, seventh, and eighth grades because the teacher cannot command the situation. I am not referring to school discipline, for that has generally taken care of itself in the better school cities of the country; but I mean the teaching or training situation. We are likely, however, to have some unsatisfactory teachers in these grades so long as teachers' salaries remain where they were before the present era of high prices set in; so long, too, as we must await, not one Horace Mann, but a dozen Horace Manns, to go up and down certain parts of the country preaching with convincing eloquence that people in this time of overabounding prosperity can spend more money for really good schools than they are doing.

Under the present conditions, with some unsatisfactory teachers in the grammar schools, these schools should be systematically, courageously, and intelligently supervised. Supervision, to increase the efficiency of the school, should aim in the large to make better teachers. Every school, in a sense, should be a training-school. Every small school system is a real training-school for teachers, if it be capably superintended. Every school building in a large city school system is a training-school for teachers, if the man or woman in charge of it be an intelligent leader of teachers, with sound convictions about education and with ability to carry these convictions into practice in the operation of his school. Such a superintendent or principal earns his salary half a dozen times over. In such a school the fundamental truth in school administration is realized, that the growth of the pupil cannot go on apart from the growth of the teacher.

Supervision should include testing the skill or power of the pupils. How many pupils in the sixth year cannot read, judged by reasonable standards? Principals should know who such pupils are, and the reasons why they are deficient. These tests, while unscientific and crude, are valuable in revealing the deficiency of pupils and promoting efficiency. Some time we may have an accepted standard of what pupils may be expected to do and know at a given age or grade. Until then, each must in a measure establish his own standard, and each, however good his schools or proficient his pupils, may be open to the charge of failure to train in the so-called fundamental branches. Not the least useful result of the testing is the interest it should arouse in pupils. Every principal or superintendent with not more than fifteen hundred pupils should, thru his teachers or otherwise, know all those children who are abnormally bright or abnormally deficient.

The efficiency of the grammar school would be promoted by judicious eliminations from the course of study. Dr. McMurry pointed out two years ago at the Atlanta meeting what some of these eliminations might be. I can only add here that my experience has taught me that mere generalities to teachers about eliminations will not suffice. Many teachers require a bill of particulars.

There should be some substitutions as well as eliminations. The city grammar school has been somewhat tardy in responding to the needs of the times. Better civic government is widely recognized as one of these needs. What is the average grammar school doing to interest its pupils in city government by concrete examples of the way a city is governed or the way it ought to be governed? The application of science to domestic and industrial life is familiar to everybody. What is the grammar school doing to acquaint its pupils with some of the simple applications of science, to be found perhaps within a square of the school building?

Bearing in mind the manifest imperfections of the grammar schools and the high schools, the fact remains that these schools are a great effective force for righteousness and for the promotion of right ideals. Never so much need as now for the grammar school to hold up ideals of life by means of large reading of the best in literature; of history, foreign as well as our own; and also by means of instruction in art and in music.

A grammar school is not a good school in proportion to the number of facts it gives to its pupils. It certainly is not a good school unless it gives to its pupils power to get

facts intelligently and in a self-reliant way. As Dr. McMurry has pointed out, the informational ideal must give way to the ideal of power—power to use books, to study from books after the teacher has disappeared.

Under the stress of new subjects in the grammar schools, there must, first, be more intelligence on the part of teachers; second, elimination of subjects, much talked about, but not always practiced; third, increasing attention to teaching pupils how to study; fourth, a greater purpose to give pupils the power to use books.

ROUND TABLES

A. ROUND TABLE OF CITY SUPERINTENDENTS OF LARGER CITIES

TOPIC—INTERRELATION OF FUNCTIONS IN A CITY SCHOOL SYSTEM

INFLUENCE OF THE SUPERVISOR

ADA VAN STONE HARRIS, SUPERVISOR OF SCHOOLS, ROCHESTER, NEW YORK.

The term "supervisor" is misleading, as it is used to cover varied responsibilities. In some school systems the supervisor is in reality, an assistant superintendent—doing general supervisory work, and sharing in the executive functions of the superintendent. In other systems the work is that of a special and minute supervisor of the individual teacher—in reality an extension and reinforcement of the work of the school principal. It would conserve clearness of thought if this difference in functions were recognized in the title used. To those who are doing general supervisory work the title of assistant might be given; to those who are doing special supervisory work, the title of director.

I shall have in mind in this discussion the general supervisor or assistant superintendent, who is responsible for the entire field of work for a given number of grades, or for all grades in co-operation with the superintendent, or for a given district.

The duties of a general supervisor are, from the educational side, identical with those of the superintendent, in a more limited sphere. The need in many cities, however, is to make the school system feel this. The teaching corps, the principal included, should be led to understand that the supervisor on visiting the school is an authority recognized as a representative of the superintendent; that when the supervisor or assistant superintendent speaks, it is as if the superintendent were speaking.

The relation of the supervisor to the superintendent should always be that of a co-worker, subordinate, but sharing equally all duties and responsibilities, failures and successes. A supervisor who cannot go into the schools in harmony with the spirit of the school policy, as laid down by the superintendent, has no moral right to retain the position.

Two of the absolutely necessary attributes of a supervisor in his relations to the superintendent are unqualified loyalty and candid frankness. There should be no hesitancy to express a conviction regarding the policy in vogue. He should at all times set before the superintendent his plans and methods of instruction, so that all instruction given or changes in plan may go to the teaching corps, first having received the approval of the superintendent.

It is the supervisor who gives aid and advice to the teachers whom the superintendent appoints. His duty is to make the teachers better, to aid in raising the educational standards. He is not to sit in judgment, or to act as a disciplinarian; but he must

arts may be co-ordinated with the other subjects of the school curriculum. This unifying process can be accomplished only where the supervisor has gained the confidence of the special teachers thru helpful suggestions, candid criticism, and frequent conferences which will help them to see the system as a unified whole.

With this general view of the situation, seeing and realizing the needs, the supervisor brings to the superintendent invaluable assistance. The hour for the discussion of these problems from the field, of ways and means for bettering conditions, proves of mutual benefit to all when brought out thru the superintendent's round table of assistants or co-workers.

Teachers' meetings hold an important position in harmonizing and unifying the work of a city system. Just how to conduct and make these meetings most effective is often a problem not easy to solve, especially when there are a number of special supervisors, each eager to develop his own subject to the highest point.

If I may be pardoned a personal reference, I will outline a system used in my own city that has proved exceedingly valuable. In accordance with the provisions of the state law which allows to each teacher five days of institute work during the school year, there has been developed a system of grade institutes. The institute is held on Friday of each week, with morning and afternoon sessions, the pupils of the particular grade being dismissed for the day. We have held each year for the past five years an average of over thirty institutes, thus bringing together the teachers of each grade at least three times during the year.

Teachers' meetings after school should be reduced to the minimum. In thus devoting three days of regular school time to the institute, the number of grade meetings that would have otherwise been essential has materially been reduced. The coming-together of the teachers of any grade for the day, when they are fresh and rested, develops a spirit of interest, open-mindedness, sympathy, co-operation, and sociability on the part of all, which cannot be obtained at a grade meeting after the fatigue of a day's work. The aim in all these institutes has been to bring to the teachers good cheer thru helpful suggestion and inspiration.

In the beginning illustrative lessons were taught in all grades by the general supervisor. Ways and means for the development of the course of study for the particular grade have been considered and discussed. an effort always being made to meet the needs of the teachers of the children of all localities. In many instances suggestive outlines for the illumination of a subject have been given, these outlines often coming from the teachers themselves. Specimens of class work of all kinds from various schools are always displayed for study, suggestion, and comparison. The special supervisors are in attendance for the entire day and here outline their work. The teachers themselves have come to contribute largely to the success of these institutes by the skillful conducting of class exercises. This feature of the work has been full of suggestion and inspiration. We have had from time to time class exercises in all of the branches of the school curriculum, and have aimed to make the conditions surrounding such exercises as nearly those of the schoolroom as possible.

To the superintendent and the supervisor possibly the most gratifying results from these institutes were shown in the last series held, when each teacher was asked to bring a limited number of specimens of her class work in all subjects—these to represent the best, medium, and poorest in each group—and to place them on the wall for study.

Subjects were assigned to each grade for a free and open discussion. The aim and purpose of the leader of these conferences, whether superintendent or supervisor, was to bring out the best from each individual; to mold all diverse opinions into a harmonious whole; in short, to arrive at the truth by comparison of views and suggestions from one another. In every instance the discussion extended beyond the allotted time, and was full of valuable suggestion, both for teachers and supervisors.

Through these institute conferences we have come to know our teachers more intimately. We discover often that someone who is retiring in disposition, and whom we have not considered especially strong, is, when once brought out, a teacher of exceptional ability.

I believe that meetings, the character of which I have described, whether held all day, a half-day, or after school hours, will secure the confidence of teachers, and will aid the supervisor to impress himself upon them, not as a dictator, but as a counselor, guide, and friend, working with them in full accord and for a common end.

In meetings, of whatever character, the supervisor should make clear his ideals, views, and aspirations, and with such a spirit of frank open-mindedness as to impart enthusiasm to his teachers.

The work cannot rise much above the level of the supervisor, and its progress may be fairly measured by the character, energy, skill, and personal attainments which he possesses, and the zeal with which the teachers co-operate with him. The head and heart and soul of the supervisor must be great enough to check when necessary, to direct definitely, to encourage on every possible occasion, to stimulate to the highest ideals, and in all things to prove himself worthy of being a leader.

THE INFLUENCE OF THE CITY NORMAL SCHOOL OR TRAINING-SCHOOL

ELLA FLAGG YOUNG, PRINCIPAL OF CHICAGO NORMAL SCHOOL, CHICAGO, ILL.

The problem, stated definitely in its bearing on the division of the forces mentioned in the topic, is something like this: The city normal school should be a recognized power in the system of which it is a part; and if it does not command the respect and co-operation of the high-school faculties, and of all the elementary-school principals and teachers, why?

Graduation from a city normal school; service at the head of a practice school, and in the academic department of a normal school; and membership in a state board of education whose interest lies primarily in the state normal university, make it possible for me to discuss the weakness of the normal school without creating the suspicion of hostility to that school which, notwithstanding its weakness, represents the best efforts making for the advancement of the elementary schools. Some day the high school will be included in those to be aided by the normal school.

The function of the normal school, whether exercised within the limits of a state or of a city, would be generalized in the same terms: It is to maintian a high standard of life in the school system. The normal school fails of its purpose if it does not nourish the entire school system, making the reality of life more definitive and the charm more genuine.

There are two groups of persons whom the normal school aims to influence directly: those preparing to teach, and those engaged in teaching.

Difference in the extent of territory of which the training-school or college is the center does not affect the generalization of the function of a state or a city normal school. In questions of detail, however, there are modifications, arising because of the close proximity of the schools with which the city normal is identified; modifications that are not apparent in the state school. The rapid increase in the membership of the lowest primary-grades, especially in the crowded districts peopled with immigrants from the continent of Europe, made it evident to city superintendents at an early date that cheap service quickly prepared was eminently desirable. Because of the emphasis thrown on the desirability of cheap labor, the city normal school was founded on that practice which, under the peculiar title of "segregation," has been exploited in the Mississippi Valley in very recent time, as new and experimental.

Young women, and young women only, were admitted to classes preparing to teach in city schools. As a result of this plan, the city normal schools have always been given over to young women students, who are valued very largely as prospective teachers in the most poorly paid part of the service, altho superintendents of schools and principals of normal schools are loath to state the matter so baldly. Yet such is the condition, and because of it the quality of the work has been materially lowered.

To plan a course of study that shall ostensibly fit students to instruct in any grade of the elementary school, and then to administer it with the consciousness that an overwhelming majority of the class will be fitted to teach in the first two or three grades only, must influence the genuineness of the instruction. In course of time some of the graduates are transferred to the higher grades; but so insincere has been their preparation for advanced teaching that they influence almost not at all the scholarship or method of the upper grades by means of the theory and practice of the normal school. They reproduce very largely the methods and point of view of the teachers who taught them when they were pupils in the upper grades of the elementary school, and so it comes about that the normal school is not felt to any appreciable extent thruout the entire city school system.

Efforts made in recent years to draw young men into the city normal school have not had a marked effect on the situation. Of course, the same conditions, commercial and professional, have been operative thruout the country, have been effective in the large cities; but the taint of "segregation" is on the city training-school for teachers.

The standard of admission has been raised thru the efforts of progressive superintendents. This has not affected the personnel of the student body, altho it has increased the average scholarship. Much of the work attempted in the upper grammar and high-school grades bears evidence of haste and superficiality. The high school meets the evidence with the assertion that its best graduates rarely enter a normal school. This is a foolish subterfuge. The high-school student carries too many subjects.

Every city normal school has many students who are endowed with fine minds and have strong characters. The difficulty there is in the failure of the school to develop talents. The old, narrow plan is still in force for students who are not fitting to take a specialist's diploma. Those who are intending to enter the grade- or class-rooms as teachers are not given opportunity to develop their powers as in colleges and polytechnic schools. The all-around fallacy still has sway in one school beyond the high school—the normal school. The lack of initiative in original work is generally admitted to be a weakness common to city normal-school graduates. Why not develop the strength of the student body?

In turning to the second group, we find that the state training-school for teachers has always had a large clientele of experienced teachers, who take vacations from teaching in order that they may return to complete a course of study begun years before. This explains the early appreciation of the whole situation by the state school, before the city school realized that it should stand in direct relation to teachers in active service. Today, however, the conception of a city normal school is not limited to an activity that influences the school system thru the young teachers only; it is expanded to a form and quality of life that pervade the whole teaching corps, energizing the system thru its many members.

But the members forming the group of experienced teachers do not present the same conditions to the faculty which desires to influence them. There are those who early in their professional career abandoned all efforts in lines of advanced study. Often this was the result of assignment to a school not enveloped in an atmosphere of invigorating work; to a school whose principal was not a leader. But, in the large cities, the number lost to all interest in higher pursuits is less than the number endeavoring to keep up some line of advancement. It is a revelation to many a stay-at-home bookworm to hear the descriptions of travel, the discussions of art or music, the accounts of club

work, entertainingly given by city teachers. It goes without saying that the large cities, with their restless, seething thousands of human beings, develop an elasticity of mind and a poise of judgment in teachers that make discriminating and appreciative workers of a large part of the second group which the faculty of the city normal school aims to influence directly.

The means of approach to this service are thru instruction in the principles, history, and practice of education; thru instruction in advanced academic subjects; thru laboratory work in the method of the arts and the sciences. This instruction and work, to be valuable, must keep active in the consciousness of the students and the teaching body, not only those knowledges which are the conservators of the best which the race has done, but also those forces which purposely develop the originality of the individual. It is a delicate task to discuss the method of instruction in the normal school. With a few conspicuous exceptions, instruction in the various topics under education might be described as philosophizing in the shallows. As a rule, educational psychology and the philosophy of education are presented before the students have a basis in psychology and philosophy from which to develop the applications; before they have even a little experience in that sort of thinking.

Educational psychology, which is the application of psychology to teaching, is taught before the students have acquired the power to analyze their own consciousness. The history of education is discussed from a philosophical standpoint before the students have a bowing acquaintance with a single system of philosophy. A few words and phrases are associated with the names of Plato, Aristotle, Kant, and Hegel, and used as satisfying substitutes for great theories of life. The application of psychologic terms before the principles for which they stand have been thought out, and the phrasing of philosophic truths before the generalizations which they represent have been grasped, give a fictitious command of a technical vocabulary, develop a language technique, which misleads the student, who acquires facility in juggling with the strange terminology.

The result of this method is apparent. On every hand complaint is made that normal-school graduates are too vague and indefinite in their educational comprehension of problems in a strange environment; that they do not get close to the actual conditions in the problems of the schoolroom, and in those arising out of the social relations of the children.

Experienced teachers often discover in this kind of teaching a new way on the part of the instructor of stating a merely personal opinion that differs from their own. Observers sometimes say that they can see no difference between the methods of teachers who have studied psychology and those who have not. Both the discovery and the observation may be due to the inability of the listeners and the observers to understand all that is before them; or contrariwise, they may be correct.

There is a study of psychology that develops power in observing and interpreting mental activity, but it does not begin with the enunciation of the applications. There are truths about life that are intelligible to all students and teachers, but they should not be conveyed in the peculiar terminology of an unfamiliar school of philosophy. Under such conditions their meaning is hidden. It is not only permissible that they be incorporated in the talks and lectures on education and life; it is obligatory upon the teacher of the theory of education to bring great truths into the pedagogic consciousness; but they should be clothed in choice English undefiled.

Because of the limited range of subject-matter presented to students preparing to teach, the instruction in academic subjects is devoted to gentle assumptions as to the manner in which the pedagogical child would approach a given bit of subject-matter. Too few have an understanding of scientific method in teaching. Every graduate of a normal school should acquire the power to feel the method of mind in the subject studied; should recognize her own mental activity in getting at the secret of the subject-matter which embodies the experience of the race and is interpreted by her own experience.

pupil is such that it is imperative that he shall have a teacher who shall really be "captain of his soul," as Dr. Hall has put it. A great waste is going on in some sixth, seventh, and eighth grades because the teacher cannot command the situation. I am not referring to school discipline, for that has generally taken care of itself in the better school cities of the country; but I mean the teaching or training situation. We are likely, however, to have some unsatisfactory teachers in these grades so long as teachers' salaries remain where they were before the present era of high prices set in; so long, too, as we must await, not one Horace Mann, but a dozen Horace Manns, to go up and down certain parts of the country preaching with convincing eloquence that people in this time of overabounding prosperity can spend more money for really good schools than they are doing.

Under the present conditions, with some unsatisfactory teachers in the grammar schools, these schools should be systematically, courageously, and intelligently supervised. Supervision, to increase the efficiency of the school, should aim in the large to make better teachers. Every school, in a sense, should be a training-school. Every small school system is a real training-school for teachers, if it be capably superintended. Every school building in a large city school system is a training-school for teachers, if the man or woman in charge of it be an intelligent leader of teachers, with sound convictions about education and with ability to carry these convictions into practice in the operation of his school. Such a superintendent or principal earns his salary half a dozen times over. In such a school the fundamental truth in school administration is realized, that the growth of the pupil cannot go on apart from the growth of the teacher.

Supervision should include testing the skill or power of the pupils. How many pupils in the sixth year cannot read, judged by reasonable standards? Principals should know who such pupils are, and the reasons why they are deficient. These tests, while unscientific and crude, are valuable in revealing the deficiency of pupils and promoting efficiency. Some time we may have an accepted standard of what pupils may be expected to do and know at a given age or grade. Until then, each must in a measure establish his own standard, and each, however good his schools or proficient his pupils, may be open to the charge of failure to train in the so-called fundamental branches. Not the least useful result of the testing is the interest it should arouse in pupils. Every principal or superintendent with not more than fifteen hundred pupils should, thru his teachers or otherwise, know all those children who are abnormally bright or abnormally deficient.

The efficiency of the grammar school would be promoted by judicious eliminations from the course of study. Dr. McMurry pointed out two years ago at the Atlanta meeting what some of these eliminations might be. I can only add here that my experience has taught me that mere generalities to teachers about eliminations will not suffice. Many teachers require a bill of particulars.

There should be some substitutions as well as eliminations. The city grammar school has been somewhat tardy in responding to the needs of the times. Better civic government is widely recognized as one of these needs. What is the average grammar school doing to interest its pupils in city government by concrete examples of the way a city is governed or the way it ought to be governed? The application of science to domestic and industrial life is familiar to everybody. What is the grammar school doing to acquaint its pupils with some of the simple applications of science, to be found perhaps within a square of the school building?

Bearing in mind the manifest imperfections of the grammar schools and the high schools, the fact remains that these schools are a great effective force for righteousness and for the promotion of right ideals. Never so much need as now for the grammar school to hold up ideals of life by means of large reading of the best in literature; of history, foreign as well as our own; and also by means of instruction in art and in music.

A grammar school is not a good school in proportion to the number of facts it gives to its pupils. It certainly is not a good school unless it gives to its pupils power to get

facts intelligently and in a self-reliant way. As Dr. McMurry has pointed out, the informational ideal must give way to the ideal of power—power to use books, to study from books after the teacher has disappeared.

Under the stress of new subjects in the grammar schools, there must, first, be more intelligence on the part of teachers; second, elimination of subjects, much talked about, but not always practiced; third, increasing attention to teaching pupils how to study; fourth, a greater purpose to give pupils the power to use books.

ROUND TABLES

A. ROUND TABLE OF CITY SUPERINTENDENTS OF LARGER CITIES

TOPIC—INTERRELATION OF FUNCTIONS IN A CITY SCHOOL SYSTEM

INFLUENCE OF THE SUPERVISOR

ADA VAN STONE HARRIS, SUPERVISOR OF SCHOOLS, ROCHESTER, NEW YORK.

The term "supervisor" is misleading, as it is used to cover varied responsibilities. In some school systems the supervisor is in reality, an assistant superintendent—doing general supervisory work, and sharing in the executive functions of the superintendent. In other systems the work is that of a special and minute supervisor of the individual teacher—in reality an extension and reinforcement of the work of the school principal. It would conserve clearness of thought if this difference in functions were recognized in the title used. To those who are doing general supervisory work the title of assistant might be given; to those who are doing special supervisory work, the title of director.

I shall have in mind in this discussion the general supervisor or assistant superintendent, who is responsible for the entire field of work for a given number of grades, or for all grades in co-operation with the superintendent, or for a given district.

The duties of a general supervisor are, from the educational side, identical with those of the superintendent, in a more limited sphere. The need in many cities, however, is to make the school system feel this. The teaching corps, the principal included, should be led to understand that the supervisor on visiting the school is an authority recognized as a representative of the superintendent; that when the supervisor or assistant superintendent speaks, it is as if the superintendent were speaking.

The relation of the supervisor to the superintendent should always be that of a co-worker, subordinate, but sharing equally all duties and responsibilities, failures and successes. A supervisor who cannot go into the schools in harmony with the spirit of the school policy, as laid down by the superintendent, has no moral right to retain the position.

Two of the absolutely necessary attributes of a supervisor in his relations to the superintendent are unqualified loyalty and candid frankness. There should be no hesitancy to express a conviction regarding the policy in vogue. He should at all times set before the superintendent his plans and methods of instruction, so that all instruction given or changes in plan may go to the teaching corps, first having received the approval of the superintendent.

It is the supervisor who gives aid and advice to the teachers whom the superintendent appoints. His duty is to make the teachers better, to aid in raising the educational standards. He is not to sit in judgment, or to act as a disciplinarian; but he must

pupil is such that it is imperative that he shall have a teacher who shall really be "captain of his soul," as Dr. Hall has put it. A great waste is going on in some sixth, seventh, and eighth grades because the teacher cannot command the situation. I am not referring to school discipline, for that has generally taken care of itself in the better school cities of the country; but I mean the teaching or training situation. We are likely, however, to have some unsatisfactory teachers in these grades so long as teachers' salaries remain where they were before the present era of high prices set in; so long, too, as we must await, not one Horace Mann, but a dozen Horace Manns, to go up and down certain parts of the country preaching with convincing eloquence that people in this time of overabounding prosperity can spend more money for really good schools than they are doing.

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be a sympathetic counselor who will guide the young teacher into right ways of teaching, and the older teachers, who do not understand the meaning of the course of study, to a wise and clear interpretation of the same. It is the supervisor who discovers and can point out to the superintendent sources of strength and weakness in the schools as a whole, who knows where questionable practices are existing which should be modified; and, if he is equal to the position he occupies, he should be able to offer suggestions which will rectify all these defects.

It should be the business of the supervisor, as of the superintendent, when visiting a school, to talk very candidly with the principal about the work of the school. He should state definitely what suggestions he has given to teachers, and point out where the weak points of the school are, as viewed from the standpoint of one who sees the system as a whole. If orders be necessary, or advice regarding the general policy of the school; if any new instruction of consequence is to be given; any new policy outlined, it should be made plain to the principal, and, if possible, the hearty co-operation of the principal should be secured. The supervisor should always recognize the principal as the head of his school, and by wise, tactful, and sympathetic counsel assure him that he is there to construct, to help him to build up a stronger school. By establishing a spirit of co-operation, lending a helping hand in every direction, the principal is led to feel that he is responsible for his school, and will be held so. He should also be held responsible for his attitude toward the supervisor. The individuality and personality of a school should not in any way be interfered with—so long as the best efforts are put forth by the teachers and principals, prompted by a spirit of loyalty and co-operation to the system as a whole.

One of the most vital problems which confront those in supervision is, how best to make the teachers with whom we are associated more efficient. Teachers may be made more efficient thru school visitation, teachers' meetings, institutes, study classes, and personal conferences. The measure of success attained in this work depends largely upon the tact and personal qualities of the supervisor. The function of the supervisor is not that of a police officer, nor of a detective to spy out weak teachers, nor even that of a critic; but primarily that of a helper and guide.

The supervisor who is required by a code of rules, adopted by the board and authorized by the superintendent, to go from school to school, and from class-room to class-room, and simply pass upon a teacher by the answering of a series of specific questions regarding the teaching power of each one, can never realize the best possibilities and opportunities of his position; he becomes a mere critic. He soon comes to be looked upon with suspicion by the teachers, and on his visits he is rarely, if ever, met with a cordial welcome.

The business of the supervisor is to help the teachers to teach, and to teach well; to make it easier for them; to guide them; and to stimulate them to higher ideals of efficiency by bringing to them the best possible helps in the way of suggestive outlines, bibliographies, and materials; by directing them to visit places where the most effective and efficient work is being done; and thus to inspire them to a greater joy and larger beauty in their chosen profession.

It is unfortunate that the word "criticism" plays so large a part in our educational work—"Criticism destroys genius, dulls brightness, enervates power, and saps all life. Criticism is too often destructive and discouraging, leaving the teacher without clearer views of what should be done, and too frequently without inspiration to seek a better way. Creative and stimulative suggestion is far more effective."

The great danger in all supervision is in emphasizing the negative side. By holding before us positive ideals, seeking only for the good, the work of supervision becomes an inspiration to both the supervisor and the supervised. The hearty approval of some one thing seen or heard in a class-room arouses the cordiality and gratitude of the teacher to whom it is given. It establishes a feeling of professional kinship, and sets the teacher

to analyze her own work; to seek for opportunities to improve in other directions, in order that other words of approval may be spoken. A feeling of confidence and sympathy has grown up, and the teachers no longer dread the supervisor's visits or hesitate to go to him for advice. He is a proven friend, helper, and guide. All sorts of difficulties come to be laid before him to be solved. Office hours are filled to the limit, in advising with teachers over problems, not simply with reference to the details of methods or class-room work, but with reference to the handling of peculiar and difficult children. Personal matters also frequently are laid before him for advice.

When observing a class, effort should always be put forth to discover the teacher's reason for using the method that she does. I often find the means used is justified in the end attained. We have no right on any occasion to object to what we find, or to say to the struggling soul, "That is wrong," unless we can concretely put before her some better way, which leads us to say: "Try this; I think you will find this an easier way, and you will attain better results."

This personal conference with teachers, if properly managed, may prove a source of reciprocal training. The best sort of pedagogical schooling comes by being compelled to find a valid educational reason for every method of teaching and every problem of discipline. Many of my own pet theories have been exploded during such conferences.

The supervisor needs to carry into every class-room: one measure of ability to put himself in the teacher's place and stand the fire of inspection; two measures of the saving sense of humor; three measures of appreciation for the effort put forth; four of timely suggestion; and five of stimulating words of encouragement and commendation. If to these you add a very large measure of tact and sympathy, the prescription left will prove a never-failing remedy for all errors, and sunshine will come into the life of many an overburdened teacher thereby.

As year after year he goes the round of the city, visiting classes and counseling with teachers and principals, he comes to have a bird's-eye view of the whole. He knows and has advised with the teachers who are taking special courses, because they are ambitious to succeed and desire promotion. He knows those of marked and exceptional ability, who possess the keenest and most sympathetic grasp of the fundamental principles as laid down by the policy of the system, and hence may be ready for promotion as critics or model teachers in the city training-school, or for promotion to a principalship.

When modifications are necessary in the course of study for the best development of the children of a given community it is the supervisor who can touch the vital point. Why? Because he has watched the development of the work with the children, and has counseled with the teachers regarding the practicability of the method used. He sees where, if certain transfers were effected, the work would be strengthened. He knows and can point to the overcrowded class-rooms, where teachers are struggling to meet the demands of the work as laid down by the authorities. He can point out where the strong and skillful work may be found; where the specific defects of the incompetent are. He finds the young teacher who is fresh from the normal school, who is struggling with a class of irrepressible youngsters, in a new world under new conditions; helpless, but not hopeless. He detects crying evils which exist in certain buildings by the mass of belated pupils, and counsels with the superintendent that these evils may be rectified at once. Conditions of all sorts and kinds which need to be modified come to his attention; even to pleas for more cupboard room, new blackboards, new window-shades, etc.

Complaints arising from the exactions of the special supervisors, which are making grievous inroads upon time, strength, and energy, reach his ears. Here his work is most effective, in that he is able to assist in organizing the work of the special supervisors so as to unify the whole. From the point of view of a well-rounded scheme of education he is able to point out most definitely where drawing, manual training, and domestic

arts may be co-ordinated with the other subjects of the school curriculum. This unifying process can be accomplished only where the supervisor has gained the confidence of the special teachers thru helpful suggestions, candid criticism, and frequent conferences which will help them to see the system as a unified whole.

With this general view of the situation, seeing and realizing the needs, the supervisor brings to the superintendent invaluable assistance. The hour for the discussion of these problems from the field, of ways and means for bettering conditions, proves of mutual benefit to all when brought out thru the superintendent's round table of assistants or co-workers.

Teachers' meetings hold an important position in harmonizing and unifying the work of a city system. Just how to conduct and make these meetings most effective is often a problem not easy to solve, especially when there are a number of special supervisors, each eager to develop his own subject to the highest point.

If I may be pardoned a personal reference, I will outline a system used in my own city that has proved exceedingly valuable. In accordance with the provisions of the state law which allows to each teacher five days of institute work during the school year, there has been developed a system of grade institutes. The institute is held on Friday of each week, with morning and afternoon sessions, the pupils of the particular grade being dismissed for the day. We have held each year for the past five years an average of over thirty institutes, thus bringing together the teachers of each grade at least three times during the year.

Teachers' meetings after school should be reduced to the minimum. In thus devoting three days of regular school time to the institute, the number of grade meetings that would have otherwise been essential has materially been reduced. The coming-together of the teachers of any grade for the day, when they are fresh and rested, develops a spirit of interest, open-mindedness, sympathy, co-operation, and sociability on the part of all, which cannot be obtained at a grade meeting after the fatigue of a day's work. The aim in all these institutes has been to bring to the teachers good cheer thru helpful suggestion and inspiration.

In the beginning illustrative lessons were taught in all grades by the general supervisor. Ways and means for the development of the course of study for the particular grade have been considered and discussed. an effort always being made to meet the needs of the teachers of the children of all localities. In many instances suggestive outlines for the illumination of a subject have been given, these outlines often coming from the teachers themselves. Specimens of class work of all kinds from various schools are always displayed for study, suggestion, and comparison. The special supervisors are in attendance for the entire day and here outline their work. The teachers themselves have come to contribute largely to the success of these institutes by the skillful conducting of class exercises. This feature of the work has been full of suggestion and inspiration. We have had from time to time class exercises in all of the branches of the school curriculum, and have aimed to make the conditions surrounding such exercises as nearly those of the schoolroom as possible.

To the superintendent and the supervisor possibly the most gratifying results from these institutes were shown in the last series held, when each teacher was asked to bring a limited number of specimens of her class work in all subjects—these to represent the best, medium, and poorest in each group—and to place them on the wall for study.

Subjects were assigned to each grade for a free and open discussion. The aim and purpose of the leader of these conferences, whether superintendent or supervisor, was to bring out the best from each individual; to mold all diverse opinions into a harmonious whole; in short, to arrive at the truth by comparison of views and suggestions from one another. In every instance the discussion extended beyond the allotted time, and was full of valuable suggestion, both for teachers and supervisors.

Through these institute conferences we have come to know our teachers more intimately. We discover often that someone who is retiring in disposition, and whom we have not considered especially strong, is, when once brought out, a teacher of exceptional ability.

I believe that meetings, the character of which I have described, whether held all day, a half-day, or after school hours, will secure the confidence of teachers, and will aid the supervisor to impress himself upon them, not as a dictator, but as a counselor, guide, and friend, working with them in full accord and for a common end.

In meetings, of whatever character, the supervisor should make clear his ideals, views, and aspirations, and with such a spirit of frank open-mindedness as to impart enthusiasm to his teachers.

The work cannot rise much above the level of the supervisor, and its progress may be fairly measured by the character, energy, skill, and personal attainments which he possesses, and the zeal with which the teachers co-operate with him. The head and heart and soul of the supervisor must be great enough to check when necessary, to direct definitely, to encourage on every possible occasion, to stimulate to the highest ideals, and in all things to prove himself worthy of being a leader.

THE INFLUENCE OF THE CITY NORMAL SCHOOL OR TRAINING-SCHOOL

ELLA FLAGG YOUNG, PRINCIPAL OF CHICAGO NORMAL SCHOOL, CHICAGO, ILL.

The problem, stated definitely in its bearing on the division of the forces mentioned in the topic, is something like this: The city normal school should be a recognized power in the system of which it is a part; and if it does not command the respect and co-operation of the high-school faculties, and of all the elementary-school principals and teachers, why?

Graduation from a city normal school; service at the head of a practice school, and in the academic department of a normal school; and membership in a state board of education whose interest lies primarily in the state normal university, make it possible for me to discuss the weakness of the normal school without creating the suspicion of hostility to that school which, notwithstanding its weakness, represents the best efforts making for the advancement of the elementary schools. Some day the high school will be included in those to be aided by the normal school.

The function of the normal school, whether exercised within the limits of a state or of a city, would be generalized in the same terms: It is to maintian a high standard of life in the school system. The normal school fails of its purpose if it does not nourish the entire school system, making the reality of life more definitive and the charm more genuine.

There are two groups of persons whom the normal school aims to influence directly: those preparing to teach, and those engaged in teaching.

Difference in the extent of territory of which the training-school or college is the center does not affect the generalization of the function of a state or a city normal school. In questions of detail, however, there are modifications, arising because of the close proximity of the schools with which the city normal is identified; modifications that are not apparent in the state school. The rapid increase in the membership of the lowest primary-grades, especially in the crowded districts peopled with immigrants from the continent of Europe, made it evident to city superintendents at an early date that cheap service quickly prepared was eminently desirable. Because of the emphasis thrown on the desirability of cheap labor, the city normal school was founded on that practice which, under the peculiar title of "segregation," has been exploited in the Mississippi Valley in very recent time, as new and experimental.

Young women, and young women only, were admitted to classes preparing to teach in city schools. As a result of this plan, the city normal schools have always been given over to young women students, who are valued very largely as prospective teachers in the most poorly paid part of the service, altho superintendents of schools and principals of normal schools are loath to state the matter so baldly. Yet such is the condition, and because of it the quality of the work has been materially lowered.

To plan a course of study that shall ostensibly fit students to instruct in any grade of the elementary school, and then to administer it with the consciousness that an overwhelming majority of the class will be fitted to teach in the first two or three grades only, must influence the genuineness of the instruction. In course of time some of the graduates are transferred to the higher grades; but so insincere has been their preparation for advanced teaching that they influence almost not at all the scholarship or method of the upper grades by means of the theory and practice of the normal school. They reproduce very largely the methods and point of view of the teachers who taught them when they were pupils in the upper grades of the elementary school, and so it comes about that the normal school is not felt to any appreciable extent thruout the entire city school system.

Efforts made in recent years to draw young men into the city normal school have not had a marked effect on the situation. Of course, the same conditions, commercial and professional, have been operative thruout the country, have been effective in the large cities; but the taint of "segregation" is on the city training-school for teachers.

The standard of admission has been raised thru the efforts of progressive superintendents. This has not affected the personnel of the student body, altho it has increased the average scholarship. Much of the work attempted in the upper grammar and high-school grades bears evidence of haste and superficiality. The high school meets the evidence with the assertion that its best graduates rarely enter a normal school. This is a foolish subterfuge. The high-school student carries too many subjects.

Every city normal school has many students who are endowed with fine minds and have strong characters. The difficulty there is in the failure of the school to develop talents. The old, narrow plan is still in force for students who are not fitting to take a specialist's diploma. Those who are intending to enter the grade- or class-rooms as teachers are not given opportunity to develop their powers as in colleges and polytechnic schools. The all-around fallacy still has sway in one school beyond the high school—the normal school. The lack of initiative in original work is generally admitted to be a weakness common to city normal-school graduates. Why not develop the strength of the student body?

In turning to the second group, we find that the state training-school for teachers has always had a large clientele of experienced teachers, who take vacations from teaching in order that they may return to complete a course of study begun years before. This explains the early appreciation of the whole situation by the state school, before the city school realized that it should stand in direct relation to teachers in active service. Today, however, the conception of a city normal school is not limited to an activity that influences the school system thru the young teachers only; it is expanded to a form and quality of life that pervade the whole teaching corps, energizing the system thru its many members.

But the members forming the group of experienced teachers do not present the same conditions to the faculty which desires to influence them. There are those who early in their professional career abandoned all efforts in lines of advanced study. Often this was the result of assignment to a school not enveloped in an atmosphere of invigorating work; to a school whose principal was not a leader. But, in the large cities, the number lost to all interest in higher pursuits is less than the number endeavoring to keep up some line of advancement. It is a revelation to many a stay-at-home bookworm to hear the descriptions of travel, the discussions of art or music, the accounts of club

work, entertainingly given by city teachers. It goes without saying that the large cities, with their restless, seething thousands of human beings, develop an elasticity of mind and a poise of judgment in teachers that make discriminating and appreciative workers of a large part of the second group which the faculty of the city normal school aims to influence directly.

The means of approach to this service are thru instruction in the principles, history, and practice of education; thru instruction in advanced academic subjects; thru laboratory work in the method of the arts and the sciences. This instruction and work, to be valuable, must keep active in the consciousness of the students and the teaching body, not only those knowledges which are the conservators of the best which the race has done, but also those forces which purposely develop the originality of the individual. It is a delicate task to discuss the method of instruction in the normal school. With a few conspicuous exceptions, instruction in the various topics under education might be described as philosophizing in the shallows. As a rule, educational psychology and the philosophy of education are presented before the students have a basis in psychology and philosophy from which to develop the applications; before they have even a little experience in that sort of thinking.

Educational psychology, which is the application of psychology to teaching, is taught before the students have acquired the power to analyze their own consciousness. The history of education is discussed from a philosophical standpoint before the students have a bowing acquaintance with a single system of philosophy. A few words and phrases are associated with the names of Plato, Aristotle, Kant, and Hegel, and used as satisfying substitutes for great theories of life. The application of psychologic terms before the principles for which they stand have been thought out, and the phrasing of philosophic truths before the generalizations which they represent have been grasped, give a fictitious command of a technical vocabulary, develop a language technique, which misleads the student, who acquires facility in juggling with the strange terminology.

The result of this method is apparent. On every hand complaint is made that normal-school graduates are too vague and indefinite in their educational comprehension of problems in a strange environment; that they do not get close to the actual conditions in the problems of the schoolroom, and in those arising out of the social relations of the children.

Experienced teachers often discover in this kind of teaching a new way on the part of the instructor of stating a merely personal opinion that differs from their own. Observers sometimes say that they can see no difference between the methods of teachers who have studied psychology and those who have not. Both the discovery and the observation may be due to the inability of the listeners and the observers to understand all that is before them; or contrariwise, they may be correct.

There is a study of psychology that develops power in observing and interpreting mental activity, but it does not begin with the enunciation of the applications. There are truths about life that are intelligible to all students and teachers, but they should not be conveyed in the peculiar terminology of an unfamiliar school of philosophy. Under such conditions their meaning is hidden. It is not only permissible that they be incorporated in the talks and lectures on education and life; it is obligatory upon the teacher of the theory of education to bring great truths into the pedagogic consciousness; but they should be clothed in choice English undefiled.

Because of the limited range of subject-matter presented to students preparing to teach, the instruction in academic subjects is devoted to gentle assumptions as to the manner in which the pedagogical child would approach a given bit of subject-matter. Too few have an understanding of scientific method in teaching. Every graduate of a normal school should acquire the power to feel the method of mind in the subject studied; should recognize her own mental activity in getting at the secret of the subject-matter which embodies the experience of the race and is interpreted by her own experience.

Attempts to do the interpreting for children not present, and to decide how to teach that whose method is a mystery to the class, wearies the best minds, dulls the faithful who do not know that they don't know, and graduates many an incompetent one into the teaching corps. The idea that a teacher learns in a different way from that in which other people learn is pernicious. The teacher acquires knowledge as other human beings acquire it; and then goes on to organize the material so that he may set a problem, or make plain the conditions of a problem, for the pupils.

The deepest convictions of the normal school should be a belief in the subtlety and effectiveness of thought, and a belief in development thru the achievement of the individual. With these convictions incarnate in its workings, the city normal school will command the respect and co-operation of the elementary and the high school. Thru its young graduates it will give added vigor and fulness of life to the system. By means of its work in classes of experienced teachers it will break up the tendency to ossification in the system.

Everywhere the evolution of the public school system as an organic part of the life of the city has been singularly uneven and inadequate. The city normal school should function more positively in supplying the system with the means of life, not the means of repetition merely; it should anticipate a progress that proceeds spontaneously and constructively toward an end which is within the activity of the school itself.

B. ROUND TABLE OF SUPERINTENDENTS OF SMALLER CITIES

TOPIC—THE LOCAL TRAINING-SCHOOL AS AN AGENCY FOR THE PREPARATION OF TEACHERS

WILBUR F. GORDY, SUPERINTENDENT OF SCHOOLS, SPRINGFIELD

In discussing this subject it is well to bear in mind that the point of view will greatly depend upon the conditions under which the superintendent finds that he must work. In Springfield, for instance, it is easy to reach many towns and cities in a densely populated state like Massachusetts. But in other places, where the population is not so dense, of course the difficulties of securing teachers are much greater.

There are manifest advantages in having a local training-school as an agency for the preparation of teachers. Such a school offers an opportunity for specific training in response to local needs and ideals, it insures a plentiful supply of teachers to meet every emergency, and in some cities and under existing conditions it enables the school authorities to maintain a higher standard of teaching efficiency.

But there are disadvantages. In the first place, small cities are not likely to spend enough money upon a local training-school to give the broad, thoro training which the present complex educational situation demands. The taxpayers are not willing to vote a sufficient sum of money to train teachers in a broad way. State normal schools can get large enough appropriations to do the work as broadly as the importance of the training demands, and state institutions will, therefore, better serve the interests of the teaching profession than the local training-school is likely to do. Never before have the schools so greatly needed teachers of accurate scholarship, pedagogical insight, and teaching skill. We often speak of an enriched and broadened course of study, but it is well to keep constantly before us the important fact that there are in reality two courses of study; one of these is that outlined and existing on paper, and the other is the one which is actually carried out in the everyday work of the schools. After all, the course of study will be no broader than the teacher's power of interpretation. If the teacher is

narrow, the course of study will be narrow in its operation, no matter how broad it may be as outlined by pedagogical experts. There is not so much lack of ingenuity in the use of devices and methods as in the ability on the part of the teacher to select those pedagogical facts that best illustrate the vital forces and truths which should be taught.

It has often been said, but it needs to be repeated, that quality rather than quantity should be the key-word in the schoolroom. One reason why the curriculum is so overcrowded is because, thru a lack of perspective, the selective principle is not properly applied. Therefore we need a larger number of well-equipped normal schools under the control of the state.

But not only will the state normal school be likely to do a broader work than the local training-school, it will also be much freer from the baneful influence of local politics. Many a local training-school is an open door to inefficiency, and furnishes the petty politician an opportunity for putting into practice his pet theory of doing the thing that benefits the community. What he really does is to benefit a class at the expense of the entire community. The interest of the community is served by getting the most efficient teachers possible, wherever they may be secured, and the politician would benefit the class by selecting from that class people to do the work of the schools, whether they do it efficiently or inefficiently. If there is a local training-school, the pressure of local politics is likely to be so strong that a very large percentage of local people who wish to teach will be admitted to the school, and will be allowed to remain until they graduate, and then secure positions, irrespective of their ability to do the highest grade of work. This condition of affairs is true in many cities in various parts of the United States today. The local training-school is easily accessible to the people who are not by nature fitted to become teachers, and who would not go to the expense and trouble of attending a normal school that is not within easy reach. Many such people had better go into other occupations, and are likely to go into other occupations if a local training-school is not near at hand. The result is that the selections are made without any reference whatever to the ability of the teacher to do the work. The selection is made on the basis of favoring those people who desire to get something to do; therefore a small class in the community gets the advantage, while the community at large suffers. Higher professional standards must be insisted upon before the American people can get the best returns for the money they are investing in education. We need scholarship and professional training; but, most of all, we need virility and vitality of a high order behind the teacher's desk. Let us as professional educators make a courageous stand for these things, and we shall find public sentiment rallying to our support.

DISCUSSION

SUPERINTENDENT J. M. GREENWOOD, of Kansas City, Mo., said that he had not recommended training-schools and did not have for them the highest admiration. He entered upon a very critical analysis of the qualifications of good teachers.

SUPERINTENDENT J. N. STUDY, of Fort Wayne, Ind., briefly discussed the question. He found it necessary to have a training-school, as the supply of normal-school graduates was not sufficient to meet the demand.

SUPERINTENDENT A. B. BLODGETT, of Syracuse, N. Y., had a local training-school in successful operation, for normal-school graduates are not in as close touch with local needs and local methods as the home-trained teacher.

SUPERINTENDENT R. E. DENFELD, of Duluth, Minn., in discussing the training-school, said that Duluth had been forced to abolish its training-school because teachers trained in the local training-school had not been able to compete with graduates of the state normal schools.

SUPERINTENDENT A. K. WHITCOMB, of Lowell, Mass., spoke for a training-school of a different kind. He advocated a training-school for normal graduates without experience, thus enabling them to become acquainted with local needs and conditions.

ASSISTANT COMMISSIONER A. S. DOWNING, of Albany, N. Y., said that experience has proven the desirability of training-schools in small cities. He said that all objections against local training-schools could be met by keeping poor material out of them.

SUPERINTENDENT MARTIN G. BENEDICT, of Utica, N. Y., said that he had suspended his local training-school for the following reasons:

1. A small city in New York cannot duplicate the opportunities which the state is offering in its various normal schools, without quite unnecessary expense.

2. Those who have grown up thru the public schools of a small city greatly need the broadening influences of surroundings entirely different from those of their own city, before they settle down for teaching at home in life-positions.

3. In order that the teaching staff may be kept at as high a standard of efficiency as possible, it is desirable that there should be quite a variety in the training which new teachers receive. It is impossible to secure an adequate variety of this sort where a large number of the teachers come from a home training-school in a small city.

4. Many unpleasant experiences in the way of solicitation on the part of parents, friends, and interested politicians are avoided when a state institution at a distance is responsible for the training rather than the local authorities.

5. A training-school is objectionable when, either thru board regulations or thru pressure of outside influences in the community, the good, bad, and indifferent are given places, the only limit being the number of vacancies. In such cases a local training-school becomes a menace to the pupil and an effective agency for preventing the schools from rising above the dead level of mediocrity.

6. A training-school limits the selection of teachers to a few, and does not permit the taking of the best from many.

7. A training-school greatly increases the problem of school administration, and is liable to decrease the effective service of the superintendent and school authorities.

8. Under the policy of a training-school, as found in some cities, free education is furnished for others than its own citizens, and gives them positions in preference to those of their own city who by their determination and ability have extended their preparation and increased their mental capacity by attending a state normal school.

9. In most cities there is an imperative demand for additional supervision—a demand which should take precedence to the establishment of a training-school, as such supervision will bring greater return to the children of the city.

THE BEST MEANS AND METHODS OF IMPROVING TEACHERS ALREADY IN THE SERVICE

WILLIAM MCKENDREE VANCE, SUPERINTENDENT OF PUBLIC SCHOOLS, MIAMISBURG, OHIO

It is probably safe to say that most teachers are made, not born; else most of us would have to be born again; and regeneration for some people is an impossible thing, as Mrs. Poyser, in *Adam Bede*, realized when she said it was a pity that Mr. Craig, the gardener, "could-na be hatched o'er again, and hatched different." The born teacher is not an extinct species, and happy is he whose commission is heaven-attested and heaven-sent; but the born teacher is so rare that, while he is not yet classed with the dodo and the apteryx, he is as seldom seen as those other *rarae aves*—the born orator, the born musician, and the born painter. Whatever debt of gratitude and admiration we may owe those souls that burn with Promethean fire, the fact remains that the world's work is not now being done by geniuses, but it is being done by ordinary people who have devoted a fair degree of intelligence and a high degree of conscience, and such humbler virtues as courage and persistence, to rendering themselves efficient. Indeed, the born teacher who does not exhibit in his work the evidence of complete mastery of the technique of his art will hardly succeed in getting it to be known that he ever was born. And the mastery of technique, whether of the piano or of preaching, of pugilism or of teaching,

is not a matter of long hair, nor of voice, nor of muscle, nor of memory, nor even of so-called aptitude, nor of any other accident of heredity; but it is a matter—and the truth, tho a platitude, needs an occasional restatement—it is a matter of practice. The mastery of the working details of any art can be gained only in this way.

The statement of the topic implies two things: first, that many of our teachers are a more or less inefficient lot; and, second, that their improvement is conditioned on a set of reactions due to external stimuli.

In this discussion I shall take for granted that the teacher already in service was possessed at the beginning of her career of average capacity and attainments. Of course, the teacher who has passed the period of probation without exhibiting promise, who has shown that she is possessed of a positive genius for missing the point, is impossible, and ought to be cut off without benefit of clergy. To be sure, her official translation should be done with a due regard for the dictates of humanity, and the executive intrusted with this sad duty may well—I think he usually does—pay to the memory of her well-intentioned but misapplied efforts the tribute of a sigh, if not a tear. This discussion is not for her. But it is for her who is capable of good work, against whom is brought the indictment of unrealized or lessened efficiency.

Upon the superintendent more than upon any other agency depends the improvement of teachers after they have become members of his corps. And to this work he may well devote his supreme powers; for, next to the selection of teachers in the first place, no function of his office is of higher concern than the training of his corps to higher efficiency. On these two things, the selection and the training of teachers, hang all the law (and the prophets) of school progress. There are no good schools where there are no good teachers, and the presence of even one or two poor teachers in a building greatly reduces the quality of the school's educational output.

In a small city the superintendent finds it feasible to meet his teachers with such frequency, and to know them so well, that he may become a real minister, pedagogically speaking, to their spiritual needs. The first condition of helpfulness to his corps is the establishing of cordial relations on the basis of mutual respect and appreciation. When a superintendent loses the regard of his teachers for any cause whatsoever, just or unjust, tho he be an educational expert of the first rank, he loses likewise the opportunity and power to help them. In order that he may have this power, he must needs be a man of broad and generous scholarship, of clear insight and wide vision, of technical proficiency in the teaching art, of abounding but well-tempered enthusiasm, of genuine sympathy, of transparent honesty, of a certain degree of personal magnetism, of a culture which "is to mere knowledge what manners are to a gentleman," and of a character like that of the Chevalier Bayard.

His teachers' meetings will be frequent and of many kinds. Sometimes the meeting will be a table-round, where each shall take his part and none shall be heart-sore because of precedency; sometimes it will be the lists, where he who will may shiver a lance; sometimes, a forum for the full and formal discussion of educational creeds and doctrines; sometimes, a field of tactical review and maneuver; at other times, and oftenest, it will be the olive grove of Academus where all, superintendent and principals and teachers, go to school together.

However, this ought not to be the place, in spite of my figure, where things academic are learned. Not infrequently superintendents, either from a sprit of mistaken altruism, or because they are unable to conduct a better kind of teachers' meeting, form classes for the review of common branches to enable their teachers to pass forthcoming examinations, or to win certificates of a higher grade. If this be not an actual perversion of the superintendent's office, it is, in my judgment, a work of supererogation.

The same objection, however, cannot be urged against his conducting classes of teachers in professional study, psychology, pedagogy, and history of education. Indeed,

such classes are, without doubt, one of the best means at his command, not only for the mental enrichment of his teachers in educational theory and history, but also for training in sound thinking. Certain teachers there are in every corps who lack the scientific spirit. This spirit signifies the capacity for investigation, the love of truth for its own sake, its acceptance with joy and thanksgiving when found. and its immediate adoption as a rule of action. Now, a teacher of this sort is usually willing enough to accept truth when she sees it, but usually it must be labeled and countersigned by her superintendent, who, in her estimation perchance, is its very apotheosis; or, she must find it in the columns of the monthly device instructor for which she subscribed at the annual institute; or, possibly, she may stumble across it in a book. She has also been ready, even eager, to adopt what she conceives to be truth as a rule of action, and her efforts to present it unalloyed and unabridged to her pupils in the shuttle-like rush of the daily program frequently results in pedagogical strabismus. Her sense of values is imperfect; perspective is wanting; her whole picture of educational work lacks depth. The training class affords opportunity to the superintendent to pursue with his teachers lines of investigation which will develop in them the power of constructive thinking. He may develop in them an unwillingness to accept the dicta of their calling from superintendent, or principal, or critic-teacher, in any merely docile, unreasoning, or unreflective way; and this he can do without risk to the loyalty of his corps to their supervisors, for the last thing that any truth-loving superintendent wants is allegiance based on a czar-like domination. To us who are engaged in elementary and secondary education the word of all words should be the same word that is the open sesame of the higher education, and that word is "truth." *Veritas* is the motto of Harvard; *Lux et Veritas* is the motto of Yale. On one of the Harvard gates is inscribed the command from the song of Isaiah: "Open ye the gates that the righteous nation which keepeth the truth may enter in;" and no better text can be taken by superintendent and teachers, as they study educational problems together, than, "Ye shall know the truth, and the truth shall make you free."

In this connection due acknowledgment should be made of the great value of the state teachers' reading-circles in the preparation and improvement of teachers. Altho these courses offer at times pretty strong meat for the babes in our calling, and, at other times, only a gruel-like decoction for those who have cut a full set of eye-teeth and molars; and, altho the suspicion is not wanting that occasionally certain books have gotten on the list in queer fashion; yet the movement as a whole has resulted in conspicuous benefit to teachers generally. It is worthy of confidence and acceptation. Superintendents commonly welcome it, wholly or in part, as a ready and valuable adjunct of teacher-training.

Usually the superintendent's best work is done in meetings where the teachers of a single grade only are present; or, at most, the teachers of three consecutive grades, when the special object is to have the teachers of one grade come into a fuller appreciation of the setting and sequence of their own work as related to the work of the grade above and the grade below. The grade meeting will be in the nature of a conference, marked by free interchange of thought, by recital of experience, and by courteous suggestion of better plans and methods. Here the superintendent correlates educational doctrine with educational practice. Here he grants the largest liberty consistent with a logical plan of work; and thus, from a considerable number of teachers, temperamentally different, and hence differing in plans and methods, he secures, not over-exact, but essential uniformity. Here the course of study is discussed, and teachers are encouraged to make their contributions thereto; for a course of study is a composite thing, which should be built up according to the principle of eclecticism from the best things which superintendent and principals and teachers alike may have to offer. A course of study thus constructed is a human document which may be inscribed with the utterance of Ulysses, as put in Tennyson's verse: "I am a part of all that I have met." The teacher

who feels a kinship to this human document, because of her own contribution to its existence, will experience a marvelously vitalizing influence in her own efforts to interpret it into the life of the schoolroom.

The superintendent may be of very great aid to his teachers by class visitation and inspection. The negative of this proposition is also true. It is largely a matter of manner. It has been said that an experienced observer could tell in Parliament which way the ministerial wind blew by noticing how Sir Robert Peel threw open the collar of his coat. A teacher need not be very old or very experienced to tell which way the executive wind is blowing when the superintendent visits her school. Woe betide her if it blows strongly and continuously from the east!

In a small city the superintendent is able to observe class-room work so frequently as to gather an intimate knowledge of the scholarship and working power of his teachers; here he notes those personal traits and habits which are the unerring indices of character; he discovers in the management of the school the presence or absence of right ideals and of correct educational philosophy; he makes a mental record of economic and of wasteful methods. And, in conference with the teacher afterward, with patience and tactfulness he endeavors to correct whatever of faulty manner or method he may have observed. Of course, he never criticises her before the school; but the meed of praise which is her due he may once in a while very properly utter in the presence of her pupils. His approval of good work is a powerful stimulus both to teacher and school. Often such a word of praise has created for the teacher a favorable sentiment when some antagonisms have arisen, and has enabled her to regain her lost hold. Often, by a judicious setting forth of her good qualities, he is able to turn from her the fire of adverse criticism from a hostile patron. But, whatever the nature of the superintendent's comment, if his praise be without fulsomeness and his criticism without carping, the teacher will respond with cordiality and gratitude.

The private interview, the so-called heart-to-heart talk, usually is a means of helpfulness to the perplexed or unenlightened teacher. Sometimes it isn't. Sometimes she is past help; sometimes she is helplessly inept; and sometimes the superintendent is incapable of giving the help needed. But where normal conditions of stimulus and reaction exist, the applicant for counsel and guidance ordinarily leaves the office with clearer vision, stronger purpose, renewed courage, and increased devotion. Here the superintendent, oftener than anywhere else, reveals himself to his teachers as guide, philosopher, and friend. Once in a while there is a bit of pedagogical surgery to do. The wise superintendent renders all the conditions beforehand as aseptic as possible, and then performs the operation with neatness and dispatch. Despite careful treatment afterward, the unofficial records show that the fatalities are somewhat in excess of the survivals.

There are other ways in which the superintendent may help his teachers to a larger and more effective experience. Illustrative teaching is one—done either by himself, or by some skillful teacher before her associates of the same grade. The visiting of schools is another. Occasionally the principal of the building may take her room for an hour, and allow her to slip into a room presided over by one of real teaching power. Once or twice a year, perhaps oftener in special instances, the superintendent ought to give her and her associates the opportunity to visit high-grade schools in other cities; and this should be done without loss of pay. In Ohio it is no infrequent occurrence for a superintendent to take his entire corps to Chicago for a two or three days' visit to the best schools of that city. Within recent years the Central Ohio Teachers' Association, having a membership of almost three thousand, has held three annual meetings outside of its own boundaries for the express purpose of enabling the teachers of central Ohio, particularly the rank and file, to visit the schools of Cincinnati, Indianapolis, and Cleveland. The experience is heartening. Teachers gain new ideals by seeing them applied.

They come home after such a pilgrimage with something of the exaltation of a returned worshiper from a shrine. They may be slightly poorer in purse, but they are immeasurably richer in the things of the spirit.

The community also has its part in increasing the efficiency of its teachers. The methods which it may employ are, chiefly, two: First, the community may stand positively and aggressively for the highest ideals of education, and it may demand that those ideals be worked out in a highly effective way. It will insist upon competency in the teaching force, and, to this end, it will intrust to the educational expert at the head of the system all needed powers of appointment and removal. Teachers must grow; else they will not be tolerated. This is a fine example of the *argumentum ad hominem*. Second, the community should put a higher premium upon the life and service of the true teacher —the generous award of profound appreciation. Teaching needs more of abounding enthusiasm and more of the joy of living. But enthusiasm and joy are not engendered by the fear of dismissal, the apprehension of poverty, nor the consciousness of social inferiority. The marvel is that so much of sweetness and light are found in our schools at forty dollars a month, and that so many teachers keep sunny-tempered all their lives.

Of course, the measure of a teacher's service cannot be made in dollars and cents; it transcends ordinary considerations of recompense. Teaching is indeed "the poorest of vocations, but the noblest of arts;" and it is the nobleness of our calling that dignifies the contumely, the drudgery, and the sacrifice, and draws to it many of the finest natures that dwell below the skies. But it is also true that, if the wage were less meager, the tenure more certain, and the social position of greater prestige, the new dignity, and the new joy, and the new opportunities which would be experienced by every teacher, would be speedily transmuted into superior service. The policy of the community toward its teachers ought to be one of such liberality as to encourage them to improve themselves in a broad way. There is no class of workers who can turn to such good account the results of travel and good books, and lectures, and concerts, as does the teacher; because everything which she assimilates in this way she transmits to her pupils. A generous policy would also save her from the nervous strain due to overcrowded rooms, and from the brain-fag of countless reports and papers.

But, after all is said and done, the final agency to be brought to bear on the teacher's improvement, is the teacher herself. The superintendent has rendered his best service to her when he has helped her find herself. He may disclose to her sources of power, but she must appropriate them; he may reveal to her the majesty of the child, but she must bow to it; he may inspire her with a love of truth, but she must enter upon its quest. Then, after she has come into a consciousness of larger life and power, when teaching has become an abiding joy, vastly different from the sputtering enthusiasm of earlier years, she, with every other sincere worker in whatever field of human endeavor, may find in Henry Van Dyke's lines a voice of yearning and content:

Let me but do my work from day to day
  In field or forest, at the desk or loom,
  In roaring market-place or tranquil room;
Let me but find it in my heart to say,
When vagrant wishes beckon me astray:
  "This is my work; my blessing, not my doom.
Of all who live, I am the only one by whom
This work can best be done in the right way."

Then shall I see it not too great, nor small,
  To suit my spirit and to prove my powers;
  Then shall I cheerful greet the laboring hours,
And cheerful turn, when the long shadows fall
At eventide, to play and love and rest,
Because I know for me my work is best.

DISCUSSION

SUPERINTENDENT EDWIN L. HOLTON, OF Holton, Kans.—I desire to emphasize a few points already made by Superintendent Vance, and perhaps add some personal experience.

1. The superintendent should visit his teachers as often as possible. In our smaller cities, with from four to six schools, it is possible to visit each teacher from two to five times a week. He should always leave a message of sunshine and encouragement. Do not be afraid to be on speaking terms with your teachers on entering their rooms. Make them feel that you are their helpful friend. If you are troubled over some unsolved, perplexing problem, and feel physically exhausted, better not visit schools. You will do more harm than good.

2. Make your teachers' meetings helpful and interesting, and adapted to your own local conditions. If your teachers feel that the teachers' meetings are an extra burden placed upon them, you may be sure there is something wrong with the meetings or the superintendent. If the teacher feels that the meetings are helpful, she will gladly attend. Should there be an exception to this, I should quietly remove the cause, if possible; if not, the teacher.

3. I heartily agree with what was said concerning teachers visiting other teachers in the same system of schools, and especially the entire corps, led by the superintendent, visiting the best schools of other cities. The teachers always return with renewed enthusiasm and determination to do better work. We annually renew our supply of enthusiasm by visiting the schools of Kansas City and Topeka.

But we may do all that is possible to be done by personal supervision; we may have helpful and interesting meetings; we may take the teachers to see expert teaching; we may be quite efficient in oiling and running the machinery, and still fail to render our greatest service to the teachers, and thru the teachers to the boys and girls for whom the school, with all its machinery, exists.

The statement was made at the last N. E. A. meeting by Superintendent Greenwood, of Kansas City, that about 80 per cent. of the teachers ceased to read systematically after they have once been thoroly installed as teachers. If this be true—and I do not question it—the problem of finding the best means and methods for improving teachers already in the service is an urgent one. "How can the teachers be induced to fall into studious habits of reading, and investigating educational problems?" is the problem which must be solved. But for the superintendent of a system of schools which has from fifty to sixty, or, as it sometimes happens, seventy, pupils in each room, this is not his most serious problem. His problem is how to get more teachers into the service, and how to supply more schoolrooms. I speak of this because I know these conditions do exist in many smaller and some larger cities—and they are not all in Kansas, either. We can expect teachers to make but little, if any, professional improvement under such conditions.

Therefore, I would say, the first thing to do in order to improve teachers already in the service is to give them a chance to grow. Give them time to read and to investigate educational problems. If the teacher is overloaded with regular school work during the day, and burdened with examination papers and reports during the evening, until her energy is all drained away, in the name of justice, what can we expect but that she will "cease to strive after higher ideals in self-improvement" and move, "with an accelerated velocity down an intellectual incline"? Teachers are human, and their supply of reserve energy can be exhausted. If she spends six hours a day in teaching her one section of thirty-six pupils, and one hour in preparing the work for the next day, she should be able to leave her schoolroom not later than five o'clock, with all her school work completed for the day. Her evenings must be kept sacredly free from daily school work, and the drudgery of looking over examination papers, and making endless, and

many times needless, reports. Save the teacher's energy for work which will bring larger returns for the energy expended. Every ounce of teacher's energy should bring its pound of character, of life if you please, and not stacks of reports for the superintendent's office.

In our little city of Holton we have a permanent organization of teachers called the Teachers' Club. The membership in this club is wholly voluntary, but at present it contains 100 per cent. of our teachers. We read the best books on educational and related subjects, and investigate educational problems. For this year our general subject is religious education. At this time we are reading and discussing Coe's *Education in Religion and Morals*. We have for references Hall's *Adolescence*, James' *Varieties of Religious Experiences*, Starbuck's *Psychology of Religion*, Coe's *Spiritual Life*, and a few other such books. Along with this work we are investigating the workings of the juvenile court.

Early in the year we decide upon the general subject for the year or part of the year and each member investigates for the best material in the way of books, magazine articles, papers, reports, etc., on the subject, and reports the results of his investigation to the club. From these reports the material is selected. It is our aim to read and discuss the latest and best books on the subject. We find Commissioner Harris' reports an invaluable storehouse of material.

I find that the teachers are deeply interested in the work; and, as I said before, it is wholly voluntary. The work of the organization is purposely not mentioned in the printed rules and regulations of the board of education. It is our opinion that the work must be entirely elective. It is my firm conviction that teachers will read and investigate, if they are given a chance, and if the superintendent or principal will take the initiative. I have unbounded faith in the teachers of this country. They are willing to, and do, drain life's energy, until it ceases to flow, for their boys and girls.

The direct good resulting from such an organization cannot be estimated in commercial values, but I am thoroly convinced that it is giving our teachers a broader view of educational problems and a deeper interest in the teaching profession, and therefore they are better prepared to lead the boys and girls into the larger life all about them.

To summarize: In such an organization, I think, the following points are essential:

1. Give the teachers time to read and investigate.
2. The membership must be voluntary. No success grade, tenure of office, or salary proposition should be used as a pedagogical whip to force the teachers into line.
3. Only the best material should be used, and live questions discussed.
4. The superintendent or principal must take the initiative.

With conditions approaching what I have mentioned, the teachers will gladly take advantage of the opportunities for broader culture. Whatever else may be said for or against this plan, I know it to be workable, because it is working.

C. ROUND TABLE OF STATE AND COUNTY SUPERINTENDENTS

TEACHERS' SALARIES AND HOW AFFECTED BY THE OPERATION OF THE MINIMUM-SALARY LAW

FASSETT A. COTTON, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, INDIANAPOLIS, IND.

It is conceded that the pay of teachers is not commensurate with the dignity of the profession and the work required. While the professional teacher chooses his calling and works in it from motives higher than those of material gain, it is true that in order to do his best work this teacher must have money and the things that money will buy. There has been a slow and steady growth in salaries, but they are still very meager

and unsatisfactory. One of the first essentials for substantial progress is an intelligent understanding of the actual conditions by the teachers themselves.

Here are a few statistics on salaries of teachers in Indiana for the years ending July 31, 1904, and July 31, 1905:

Total paid teachers for the year ending—	
July 31, 1904	$6,832,321.70
July 31, 1905	7,356,056.31
Increase	523,734.61

Pay to teachers per day—

	1904	1905	Diff.
In townships, men	$2.57	$2.75	$0.18
" " women	2.37	2.53	.16
In towns, men	3.45	3.44	.01
" " women	2.59	2.53	.06
In cities, men	4.52	4.74	.22
" " women	2.75	2.89	.14

It will be noted that men and women in the rural schools received an increase of 18 and 16 cents per day, respectively; in towns, a decrease of 1 and 6 cents respectively; and in cities, an increase of 22 and 14 cents per day, respectively.

	Per Year
Commissioned high schools—	
July 31, 1904	$806.50
July 31, 1905	818.37
Increase	11.87
Non-commissioned high schools—	
July 31, 1904	$500.04
July 31, 1905	525.30
Increase	25.26
General average annual pay for all high schools for year ending—	
July 31, 1904	$684.81
July 31, 1905	708.91
Increase	24.10
Average annual salary of all teachers for year ending—	
July 31, 1904 ($2.56 per day)	$440.20
July 31, 1905 ($2.65 per day)	472.27
Increase	32.07

Cost of living.—The United States Bureau of Labor gives the average expenditures per family in the North Central States as $785.95 for all purposes, and as $321.60 for food alone. From this it will be seen that teachers are not making average living wages.

This growth in salaries in the rural and small town schools is the result of the minimum-wage law and the campaign for better salaries. The growth in the cities and high schools in particular is the result of the general movement in the interest of better salaries. The reports that we have just compiled from the city schools indicate that there has been a large increase in payments for high-school positions the current year over last, which is the direct result of the agitation that has been going on for two or three years. We have no figures on the salaries paid district and grade teachers for this year. These can not be secured until the end of the year, July 31, 1906. I am sure, however, these reports will show a very marked increase over last year.

State aid to poor corporations.—The law which provides for the assistance of poorer townships and towns has enabled many of these corporations to have school six months this year, the first time in their history. This will add very materially to the average salary of teachers in the townships thruout the state. This same law has enabled school boards in many small towns to employ a sufficient number of teachers to do the work well, thus increasing the teaching force in the state more than the usual yearly increase.

There are many evidences of interest in the question of raising the salaries of teachers. Notable among the cities that have increased the salaries recently is Richmond. The following from Superintendent Mott is of interest:

Our rule regulating the minimum wages in the grades is as follows: A young teacher or a new teacher, unless otherwise agreed to, is paid the legal rate in the state for five years. After five years' teaching no teacher is paid less than $55 a month; and after eight years' teaching no teacher is paid less than $60 a month. In the first grades we pay at least $65 a month, four teachers getting more. In the seventh and eighth grades no teacher gets less than $65 a month; five in the seventh and eighth grades are getting $70 or $75 a month.

Our ward principals, in eight- and ten-room buildings, get $80 a month. In the high-school teachers begin work at a price agreed upon, depending upon preparation and experience. Their wage is increased $50 a year until $800 is reached in case of women and $900 a year in case of men, those acting as heads of departments in high school receiving $1,000 a year.

The above statement shows the regular wages paid. A few receive more, but none less. Our supervisors receive $1,100 a year after they have been with us for long enough time.

The new country life.—These statements show improvement in salaries, but it is a very small percentage of what it ought to be. Then, too, the increase has occurred mainly in the cities and wealthy townships and towns, and particularly among the high-school teachers. The lower grades, the rural and small town schools, which serve the great masses of people, must be improved also. Tremendous advancement in all phases of country life is now being made, and the betterment in our schools must be in proportion to this. It might almost be said that a new era has dawned in country life. The past quarter of a century has marked a steady advancement in all things relating to the farm. Hand labor has given way almost altogether to more efficient, as well as more expeditious, machine labor; new inventions have helped and relieved the farmer every year in all of his work. Fertilizing has grown to be generally employed all over the country; and fruit-grafting is no longer a matter of wonder. More and more attention has been paid to breeding; in everything has the farm and its work been bettered. Can we say that in the last decade or two our rural and village schools have been correspondingly improved?

Conditions for living on the farm have also improved at an almost marvelous rate. Where the farmer used to spend half a week hunting helpers and arranging for the "swapping" of work, so common during the harvest time, he now spends a few moments at his telephone to accomplish the same purpose. He employs the same telephone to send to the near-by town, or possibly to some distant manufacturing city, for supplies needed at once, and in many instances the cross-country interurban brings the articles the next morning. He hauls his heavily loaded wagons about now during rainy weather on a firm gravel road, instead of being obliged to wait for dry weather.

Again, if the farmer of twenty-five years ago received his mail every Saturday, he felt satisfied. But if he lived near enough to the office to receive his mail twice each week, he considered himself fortunate indeed. Now the same man is given free delivery of mail by the government. His letters, his daily city paper containing the latest market values, are brought to his door by ten o'clock every day. Perhaps he opposed the movement in favor of establishing rural routes and free delivery, on the plea that it would increase the taxes. But now he is not satisfied with news a week old, or quotations long since changed; he must know within a few hours after its happening any event of importance, any change made in prices. So everything relative to the farm and farm life has been improved in the past few years, and will continue to improve; and the up-to-date farmer takes advantage of all these, because it pays to do so.

Have our country schools kept pace with this marvelous march forward? Have schoolhouses been remodeled and refitted proportionately to the remodeling and refitting of the farms and farm-houses? Have the country teachers received larger salaries, and become more and more efficient as the years have passed? All the benefits of which the farmer has taken advantage have tended to make better his financial standing and interests, his social standing and interests. Will it not pay as an investment alone to

keep the school up to the standard of improvement enjoyed by the farm? Is it not necessary that the farmer's children be educated in harmony with these many improvements? Is it not necessary to his future standing financially and socially to keep up with modern advancement at school as well as at home?

Cause of low salaries.—It should not be forgotten that the salary the teacher receives represents the community's estimate of the value of the school to the community. The people exalt material things and depreciate the spiritual things. They generally use good judgment in their business transactions; they want the best lawyer to look after their business interests; they choose the best physician for their families; but, somehow, they continue in the notion that anybody can teach school. But it is fair to say that lack of preparation on the part of the teacher is partly responsible for the estimate the public places upon his work. Just as soon as the people learn the difference between good and poor teaching, and just as soon as they learn that a good school, as well as scientific farming, pays, then will they demand good teachers regardless of the cost.

Again, the proper relation does not always exist between teacher and patron. The teacher does not know the people, and hence is not the power he should be in the community. For this condition the teacher is responsible. Sometimes he does not even live in the community, and of course can take no interest in it. Sometimes, when he does live in the community, he acts as if he were merely a transient sojourner, and does not enter into its life. Sometimes he is pedantic, narrow, and not well enough informed to be socially agreeable. He does not consult with the leading men and women with regard to the needs of the community. He does not invite the patrons to his school and confer with them in regard to his work and that of their children. On the other hand, the patron is responsible, too. He is not informed on schools and is not interested. He does not cultivate the acquaintance of the teacher. Sometimes he stands in awe of the teacher's superior learning, and there is a kind of a restraint like that which sometimes exists between pastor and church member. He thinks the teacher doesn't know anything but books anyhow, and that he is incapable of unbending. The fact is that, if patron and teacher would only take the trouble to get acquainted, each would be surprised to find what a good fellow the other is, and that humanity is pretty much the same the world over.

Lack of revenue.—It is often said that salaries of teachers are as high as the revenues will permit. But why are the revenues so limited? The answer is that men are not convinced of the large merits of education—they do not see that it pays. As soon as they understand that it will pay large returns, they will be willing to tax themselves for good schools. All men should pay school taxes willingly. The man with children, that his children may be educated; the man with no children, that the children of his poorer neighbor may be educated, his property protected, and peace preserved. The man of wealth often does not seem to appreciate the close relation existing between freedom and free schools; between the safety of his property and education. He does not see that the more school tax he pays, the less he will be taxed for prisons, courts, poorhouses, and tramps, to say nothing of graft.

The demands of the twentieth century are large.—Our schools must really educate the children—teach them to do things, and to do them well and skillfully. More than that, they must teach them to want to do things. They must teach them to work, and to want to work, for their salvation. A system of education that leaves one without the power to undertake and accomplish things in life is worse than worthless. The school must be brought closer to the home, to industry, to out-of-doors, to life. The average farmer and business man will be quick to take advantage of this sort of school work, because it will soon help their children to do more skillfully the daily work they are called upon to do, and more naturally and successfully the work of life; in other words, it will pay, and they will be willing to pay for it.

Men and women as teachers.—The fact that men are leaving the profession, and that it is becoming a woman's calling, has something to do with the salaries. It is not a question of whether the pay of women should equal that of men. For equal service, of course it should. But public opinion, the law of supply and demand, and other economic problems have entered this question of teachers' salaries. It is true that the more men that are retained and the higher salaries paid to them, the better are the salaries of both men and women. It is true that in systems where few men are employed the salaries of women are perceptibly lower than the salaries of women where men are more numerous. Dr. E. B. Andrews, while superintendent of the Chicago schools, tried for some time to teach the women teachers of that city this lesson in school economy, and some of them at least refused steadfastly to comprehend it.

Teaching not yet a profession.—After all, one of the greatest causes of poor pay to teachers is the fact that the vast majority of teachers are not professional educators. The calling is still a stepping-stone to other professions, and will continue to be so as long as present conditions exist. The prospective lawyer, doctor, and minister, are willing to take temporary employment as a teacher at a lower salary than a professional educator can afford to take it. There is a great deal in the attitude of consciousness with which one comes to a calling. Men enter law and medicine for life. The average life of the teacher is four years. It is safe to say that a large percentage of those who teach on and on do so in yearly anticipation of some change for the better that may come to their relief. Many are teaching because they had not the courage to starve till a competence might come in the profession of their choice. Many others are teaching because they had not the means to go into business. Poverty makes teachers subservient to society. They get used to small means and small ways, and for this reason are incapacitated for the big things in life.

Reasons for better salaries.—The professional teacher must make long, careful preparation before entering his life-work. In order to do this, he must receive such compensation as will enable him to give his best thought to his work. He must have the opportunity to make constant daily preparation after he has taken up his life-work. Under present conditions, he is often compelled to do other work "on the side," to assist him in earning a living for his family. His hours are long and his work hard. He must work in the presence of people, often under the criticism of people in other callings, and too often under unsympathetic supervisors—mechanical taskmasters instead of the professional artists they should be. This is a severe strain on the nervous system.

Just recompense.—To begin with, every teacher should have comfortable living expenses. In addition he should have enough to reimburse his expenditures in preparation. There should be sufficient salary to enable him to buy the books and apparatus necessary to carry on his work. It should be possible for him to put by a small sum, at least, every year for the time when he can no longer teach. He should receive full pay while off duty on account of sickness. If any abuse this just privilege, it is better to rid the calling of such offenders than to make the innocent suffer. The teacher should have his annual vacation, and every few years should have a year off on half-pay for rest, recreation, investigation, and added preparation.

In our rural schools the minimum salary should be $600. From this there should be rapid increase for increased efficiency and new preparation. Under such conditions good professional teachers could afford to become residents of rural communities, and would be willing to attempt a solution of their problems.

OUR MINIMUM SALARY LAW

An act to amend an act approved March 12, 1901, entitled "An act regulating the minimum wages of teachers in the public schools and fixing a penalty for violation of the same," being secs. 1 and 2 of the acts of 1901. (H. B. 81; approved March 11, 1903.)

Sec. 1. Be it enacted by the General Assembly of the state of Indiana that the daily wages of teachers for teaching in the public schools of the state shall not be less in the case of beginning teachers than an amount determined by multiplying $2\frac{1}{4}$ cents by the scholarship given said teacher on his highest grade of license at the time of contracting; and after the first school term of any teacher, said teacher's daily wages shall not be less than an amount determined by multiplying $2\frac{1}{2}$ cents by the general average of scholarship and success given the teacher on his highest grade of license at the time of contracting; and after three years of teaching, said wages shall not be less than an amount determined by multiplying $2\frac{3}{4}$ cents by the general average of scholarship and success at the time of contracting; provided that 2 per cent. shall be added to a teacher's general average of scholarship and success for attending the county institute the full number of days, and that said 2 per cent. shall be added to the average scholarship of beginning teachers.

Sec. 2. All teachers now exempt, or hereafter exempt, from examinations shall be paid as daily wages for teaching in the public schools of the state not less than an amount determined by multiplying $2\frac{3}{4}$ cents by the general average of scholarship and success given said teachers; provided that the grade of scholarship counted in each case be that given at the teacher's last examination, and that the grade of success counted be that of the teacher's term last preceding the date of contracting.

Sec. 3. All school officers shall comply with the provisions of this act, and shall pay the teachers employed by them no less than such an amount as shall be determined by secs. 1 and 2 of this act. School officers who shall be adjudged guilty of violating any of the provisions of this act shall be fined in any amount not exceeding $100 for such offense. The state superintendent of public instruction is hereby authorized to bring action against any school officer violating any of the provisions of this act.

HOW THE LAW OPERATES

I. In poor townships and towns.
   1. Encourages—
      a) Poor scholarship.
      b) Indifference as to high success grade as result of school-room work.
      c) The employment by school officials of poor teachers, and young teachers with low grade of scholarship. Teachers with high grade of scholarship are entitled to larger salaries than those fixed by the law. Many teachers request county superintendents to lower grades of licenses so the trustees will give them employment.
   2. On the whole, the law increases daily salaries in the poor townships and towns, but it shortens the term of school.
      a)*But our last legislature remedied this by the enactment of the "deficiency law." In future best teachers will be employed.

II. In wealthy townships and towns.
   1. The law has little direct effect on salaries in such corporations, as salaries here are larger than those fixed by law.
   2. But the moral effect of the law stimulates the school officials to pay better salaries.

III. The law should be framed in the interest of the teachers who make preparation for the work and remain in the profession. But this cannot be done until—
   1. Number of teachers is reduced.
   2. The standard raised, when the corporations that are able will raise the tax levies to meet requirements of a better wage law.[1]

The ideal for country schools.—In our state, with the township as the unit of our school system, the logical thing is a complete central school in each township to which all the children shall go. It should have a kindergarten, the eight grades, and a high school with a four-year course. It should have well-equipped modern buildings. Here should be located the township library, which should contain books selected with the view of meeting the demands of the community, and which should have arrangements for distributing books by means of transportation hacks and the free delivery mail system. The school center easily becomes the center of all community interests, and all meetings of the

*See "State Aid to Poor Corporations," above.

[1] In Indiana we have 16,405 teachers, whereas, on the basis of 40 pupils to the teacher, we need only 13,750; something like 3,000 teachers more than necessary. Three thousand teachers, at average annual salary of $472, draw $1,416,000. This, added to salary of the 13,750 necessary, would raise average annual salary from $472 to $575, or an increase of $103 for each teacher.

people should be held there. The school hall should be the public hall for township meetings of the people, and there everything pertaining to the public welfare should be considered. It should have a small farm, equipped for scientific elementary nature study or agriculture. It should have manual-training departments for boys and girls. It should be in session at least eight months in the year. Finally, it should have for teachers the best-prepared men and women, who have chosen teaching as their life-work, who shall live in the community, and who shall be paid respectable salaries.

Such a system would reduce the number of teachers and encourage better preparation.

CONSOLIDATION OF SCHOOLS IN INDIANA

In the matter of consolidation substantial progress has been made. The following statistics recently collected will show the actual status of this problem better than any discussion:

The Small School

1. Number of schools with 5 pupils or fewer	49
2. Number of schools between 5 and 10 pupils	286
3. Number of schools between 10 and 15 pupils	1,090
4. Number of schools between 15 and 20 pupils	1,932

Consolidation

1. Number of schools abandoned	699
2. Number of consolidated schools	280
3. Number of wagons used in transporting children	484
4. Number of children transported	8,312
5. Cost of transportation per day	$824.85
6. Average cost of wagons per day	$1.70
7. Number of townships in which roads are suitable for transportation	659

8. After a fair trial, are the people in favor of transportations. Forty-three counties answer "Yes;" nine counties answer "No;" forty counties answer, "Not sufficiently tried to determine."

THE NEXT STEPS IN EFFORT TO SECURE BETTER SALARIES

In these days of great prosperity, living expenses are perceptibly higher than they were in less prosperous times. Under such conditions many of our best teachers leave the profession. Something must be done to attract the best men and women to teaching, and make it worth while for them to undertake it as their life-work. All are agreed that something must be done, but it is difficult to name the next most important steps. In my judgment they are as follows:

The people must be aroused.—First, the public must be awakened to an appreciation of good teaching. The people are always willing to pay for *good* school advantages. The one thing that most parents are striving for is the happiness and welfare of their children, and there is no sacrifice they will not make for this purpose. Looked at from this point of view, the welfare of teachers lies almost wholly in their own hands. Better preparation, more professional zeal, larger interest in the children, closer study of the needs of the community, will bring immediate returns and a large promise for the future.

More adequate facilities for training teachers.—Second, the state must raise its standard to make large requirements in scholarship and professional training on the part of teachers. The standard must be raised to eliminate those who are poorly prepared and those who are "makeshifts" in the calling. When the supply is less than the demand, sufficient funds will be provided to induce the best young men and women to prepare for the work. This can be brought about very easily. The school authorities can set a date for better conditions, and everybody will work toward their accomplishment. Suppose it should be agreed that after September, 1911, no teacher will be employed who does not have certain qualifications; there would be five years and more for preparation. I do not know just what the qualifications ought to be, but surely something like this: (1) Teachers in the rural schools, and in the grades of towns and cities, should

have scholarship equivalent to that of a graduate of a commissioned high school with one or two years of professional training. (2) Teachers in high schools should have a scholarship equivalent to that of a college graduate with one year of professional training. (3) These would certainly require more adequate facilities for training teachers. These might easily be provided in a system of training-schools over the state which would sustain short courses, graduation from which would entitle to teach in the district and grades three or four years without examination. Then those who remain in the profession might be required to pursue their work in the central graduate school. Such a system of preparation would certainly raise the standard of teaching and do much toward making the calling the profession it ought to be.

A commission appointed by the governor.—Third, the whole question needs the careful study of experienced educators. At our last state teachers' association the writer suggested that a strong forward movement can be best determined by a commission, composed of our best students of the problem, to be appointed by the governor. By unanimous vote the association requested the appointment of such a commission.

The teachers must organize.—Fourth, finally, there should be a perfect organization of the teachers themselves to aid in bringing the recommendations of this commission before the next general assembly. This organization should be undertaken by the state teachers' association, which should appoint and pay some competent man to take charge of the work. This chief should call to his aid a number of men and women, who shall constitute the state advisory board. This board might be composed of one person from each congressional district. This member from the congressional district should in turn have a board made up of members chosen from the counties in the district, one from each county. The members of the congressional district board should in turn be the head of a county board made up of members chosen from each township in the county. Then each township should have an organization of the teachers of the districts. With such an organization the teachers could make an intelligent, aggressive, educational campaign, and could secure recognition at the hands of the legislature.

Can we afford to pay larger salaries?—Here are some actual figures of American expenditures:

Annual national government expenditures	$ 600,000,000
All other government expenditures	2,000,000,000
Annual national pensions to old soldiers	145,000,000
Annual drink expenditures	1,450,000,000
Annual expenditures for beer alone	700,000,000
Annual expenditures for tobacco	750,000,000
Annual expenditures for education	275,000,000

The annual per capita expenditure for alcohol and tobacco is $29, and for all forms of education $3.50. Our national wealth and annual business are each rated at nearly one hundred billion dollars. We do not begin to comprehend our stupendous resources. We simply do not know what possibilities are within our reach.

The outlook encouraging.—With all our difficulties, we are making progress. The outlook was never more hopeful. The calling was never more respected. The people never showed a more willing spirit toward educational work. They were never more willing to pay teachers respectable salaries. And teachers have never realized more fully than they do now that something depends upon them. Patrons and teachers are awake to the importance of the problem, and both sides have determined on better things.

No more splendid army ever marched to victory than the mighty army of school-teachers who have their faces set against ignorance and idleness in the land. Once aroused and every man to his duty, such a public sentiment will be created in the interest of better salaries for teachers that "we the people" will take hold of townships, and municipalities, and states, and the nation, and will sweep away the things that make for ignorance and idleness, and will enthrone the forces that make for enlightenment and personal righteousness.

DISCUSSION

NATHAN C. SCHAEFFER, state superintendent of public instruction, Harrisburg, Pa.—I have been asked to tell how Pennsylvania got its law fixing a minimum salary for teachers, and the effect of this legislation upon the school system. The story sounds like a romance. I used to lie awake at night, scheming how to secure an increase in teachers' salaries. Finally a woman and a newspaper reporter came to the rescue. The woman had been a teacher and was married to a lawyer, who was elected to the legislature. When he bade her good-by to go to Harrisburg, she said: "Do something to improve the compensation of teachers." The reporter was a representative of the *Philadelphia Press*.

At dinner he asked whether there was anything new in school matters. "Nothing new," I replied; "but the thing that keeps me awake at night is the low compensation which many teachers get." "Tell me about that," was his next remark. Before long Representative Snyder, whose wife had been a teacher, introduced a minimum salary act, and the *Philadelphia Press* began a campaign, during which the school department became the storm center. Maps were printed showing the "black belt" in which the teachers got the lowest wages. The friends of better salaries finally compromised on thirty-five dollars per month. This had its effect outside the so-called black belt. When the compensation of substitute teachers was raised in the cities, there became necessary an advance along the whole line. In Philadelphia the agitation filled the largest assembly hall in the city, and resulted in an increase of the salaries of all teachers below the high school. In Pittsburg the agitation brought about a classification of teachers on the basis of efficiency. This caused an awakening never dreamed of by those who inaugurated the movement. The Carnegie Library suddenly discovered that alcoves devoted to pedagogy did not contain enough books to supply the demand. The university-extension lecturers had to seek larger assembly rooms in order to seat their audiences.

So far as I have been able to learn, it has not led the school boards to hire the cheap teacher in preference to the teacher with the better grade of certificate. Fortunately, we have had no uniform examination law to deprive the superintendents of their power to grant certificates to the best qualified teachers, and to make it impossible for others to teach by refusing them licenses or certificates of scholarship. Uniform examinations level from above as well as from below, and sometimes prevent the best districts from demanding the qualifications which they could secure under a system of examinations based, not upon the average standard, but upon superior excellence. Moreover, the state superintendent can withhold a district's share of the five and a half million dollars' state appropriation, if the school directors fail to comply with the law. The experience which we have had with the minimum-salary law convinces me that this legislation has benefited the schools in every section of the state.

THOMAS C. MILLER, state superintendent of free schools, Charleston, W. Va.—West Virginia can justly claim the place of pioneer in the matter of fixing minimum salaries for teachers. By reference to the code, I find that on March 15, 1882, a bill was passed by the legislature as follows:

> Teachers having certificates of the grade of No. 1 shall be paid not less than twenty-five dollars per month; those holding certificates of the grade of No. 2, not less than twenty-two dollars per month; those holding certificates of the grade of No. 3, not less than eighteen dollars per month.

Since that enactment this provision has been amended twice, and salaries, as now fixed, are $35, $30, and $25, respectively, for No. 1, No. 2, and No. 3 certificates. While, of course, this provision applies to the entire state, it does not affect more than 20 per cent. of the school districts, and the measure was first enacted to protect the school interests of communities where the idea of economy seemed to be too dominant. In these places the law has had a good effect, and, in fact, its influence has been a helpful one thruout the state, even tho the minimum has been low.

At the last session of the legislature a bill was proposed fixing the minimum salary for a No. 1 certificate at $40 per month, but the delegates from a few portions of the state showed that such a measure would lead to burdensome local taxation, and this led to the framing of a bill providing for additional financial aid for such districts. Unfortunately, this measure failed, but I confidently believe that our next legislature will provide some means for aiding school districts having a scant school population and small material development. When this is done, the provisions of the minimum-salary law will be more readily carried out, and I think the amount will be fixed at $40 per month. I am glad to report, however, that the average salary thruout the state in country districts is considerably above that fixed by this minimum law. For No. 1 certificates the general average is $39.70; for No. 2, $31.66; for No. 3, a little above $25. The average salary in the state for all grades of certificates, based on the length of term, is $34.58.

The conditions of material development in West Virginia are so varied that there will necessarily be a great deal of difference in carrying out the provisions of any measure. When we note that in two adjoining districts one may have an eight-months' term on a 25 cents (or 2½ mill) levy, while the other can only scantily support a five-months' term on a 50 cents (or 5 mill) levy, it will be seen under what disadvantage some districts labor. These conditions are made possible by the larger industrial development in some sections, whereas in others the material progress is slow and valuations of property low in the aggregate.

Of course, teachers will go where they can secure the longest terms and the best salaries, and this for a time left some of these remote sections of the state with the teachers holding the lower-grade certificates, and in some sections there was a shortage of teachers. But the law of supply and demand has worked very well even here, and I can say that the minimum-salary requirement has worked well.

But a more potent influence in behalf of salaries for teachers is the uniform examination system provided for early in 1903. Like a thunderclap came this new law, and at first there was almost consternation in the teaching ranks; but now the new system is viewed as having wrought the greatest amount of good in the shortest period of time that any educational measure has ever produced in the state. The certificates issued by the state superintendent are valid in any county, and this new measure has, without doubt, had more effect in increasing salaries than the minimum law itself. Boards of education, in order to retain their best teachers, have been compelled to advance salaries, and there is considerable competition, not only between counties, but between magisterial districts in the same county, for the services of the more competent instructors. It is true that districts with less material development and scant financial resources may for a time seem to be at a disadvantage, but the effect of the uniform examination system has been to increase teachers' salaries very materially, and it is now almost universally commended. Of course, there are many other features of this new system that are recognized as having wrought much for our educational upbuilding, but we do not underestimate the influence of the uniform examinations in advancing teachers' wages.

Under our new revenue system we confidently expect to have a much larger school fund, and this will, no doubt, extend our term and give teachers fairer remuneration.

RURAL SCHOOL ARCHITECTURE

J. W. OLSEN, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, ST. PAUL, MINN.

Your presiding officer has requested me to "present some rural school plans (floor plans at least) which shall differ in elaborateness and be prepared in such a way that they will give valuable suggestions to builders, as well as to state and county superintendents, with estimates of cost, plans, cuts, etc."

In endeavoring to comply with the request, while I have confined this paper to the so-called "material" benefits to be derived from the building of schools modern and sani-

tary, I would say that the writer has had always in mind such schools as may furnish to the growing and coming generations a more pleasing picture than "the little red schoolhouse" brings before the retrospective vision of the older generations. It is only to the narrow mind of a Gradgrind that the beautiful and the useful are incompatible.

The school site should be selected with as much regard to its natural surroundings and its scenic possibilities as the limitations of district distances will admit. Those intrusted with the choosing of it should see that it affords ample scope for playgrounds deserving of the name. The school should not, for penny-wise economy, be relegated to some lonely, isolated spot that makes drainage impracticable and miniature farming and landscape gardening a chimera. It should fitly crown some elevation near main traveled roads—a beacon light of prosperity and culture to the wayfarer, an abiding joy and pride to its district, the real ethical schoolhouse. The structure itself should be an expression, in stone or brick or wood, of the best in modern architectural thought. It is not necessary that it be costly, but it should be true in proportion, graceful in line, harmonious and restful in coloring, simple and dignified—architecture humanized; a building that is at once an invitation, an inspiration, and a fadeless memory, free from obtrusive gaudiness, rich in essentials.

In 1901 the National Educational Association declared itself as follows:

We believe that the standards for school architecture, including the proper seating, heating, lighting, ventilation, and ornamentation of school buildings, should be as definite as the standards for teaching. The law should fix the dimensions and all other requirements for school buildings, as well as the size and character of the school grounds.

On p. 54 of the *Virginia School Laws* (edition of 1892) we find that "no public school shall be allowed in any building which is not in such a condition, and provided with such conveniences, as are required by a due regard to decency and health," and that it shall be the duty of the county superintendent to condemn unfit schoolhouses. Legislation should be enacted giving independent central authority, under safe restrictions, power to condemn unsuitable buildings and sites. Massachusetts, New York, and Pennsylvania, have realized the importance of more adequate ventilation of public buildings than now exists, and have passed laws, calling for the proper heating and ventilation of public-school buildings. Massachusetts has a state inspector to whom drawings may be submitted with a view to determining whether or not the plans meet the requirements of law and can be approved; while par. 6, art. 4, p. 556, Vol. II, *Laws of New York* (1894) reads as follows:

No schoolhouse shall be built in any union free school district until the plans for the ventilation, heating, and lighting of such schoolhouse shall be approved in writing by the school commissioners or commissioner of the district in which said schoolhouse is to be built.

Many states have laws adequately protecting the inmates of almshouses, jails, prisons, and other charitable and penal institutions, providing them with fresh air, and other means for comfort and the preservation of health. Too often the poorest, most unsightly, and worst-adapted building in a whole neighborhood is the schoolhouse, frequently insanitary and endangering the health of the pupils, who can do their best work only in the most healthful and comfortable environment. No wonder that country children seek the city with its attractive school surroundings! The time has come when educators should have the courage to make themselves heard in behalf of our school children, that at least the same protection be afforded them as is thrown about our paupers and criminals. Not only should the central authority have power to condemn unsuitable buildings and sites, but, when buildings are to be constructed, the plans should be subject to its approval. This does not necessarily mean added cost for construction; but experience has shown that many of those who plan school buildings, even with the best of intentions, do not understand how to provide proper heating, lighting, and ventilation, nor how to arrange the blackboards, cloakrooms, and seats so as to secure the greatest convenience and economy of space.

The material most suitable for schoolhouse construction depends upon climate and other local conditions. Architects who can plan a harmonious and well-appearing exterior, and who can give directions as to the most suitable building material, can everywhere be consulted; engineers can plan and install heating and ventilating plants; but not one architect in a hundred can plan a schoolhouse, especially a small one, so that its interior arrangement "will aid modern methods of school work and facilitate discipline." I shall, therefore, devote most of the time allotted me to a discussion of the schoolhouse from the teacher's point of view.

The schoolhouse should be situated on a dry hill, so that the ground slopes away from it on all sides. If the locality is flat, the basement should be well set up, without much excavation, and the ground should then be graded up about the outside, so that the hill to some extent will be made where the building stands.

It should not be situated near stagnant pools, as dangers are often associated with the putrefaction of organic matter. It is not desirable to place the schoolhouse on or below the north slope of a steep hillside, because this will prevent the free access of sunlight during the winter months. Where a basement is not provided, the ground under the schoolhouse should be as free as possible from dampness. If necessary, a drain should be built from under the building. The site most suitable will depend in a measure upon the climate. In a warmer climate, the advantages of placing an attractive schoolhouse upon the highest hilltop seem manifest. On the other hand, in a severe climate it is better to build in a less exposed place. It should have some trees about it—natural timber preferred—to form a setting, and to afford shade and protection; but not so many as to shut out the light, to make it damp and unhealthful, nor to close out altogether the view. The soil should be porous, making drainage easy.

In my judgment, the following are desirable features to combine in every schoolhouse, and in the plans submitted it is aimed to combine them:

1. *A large porch, protected by a roof*, in which the pupils may exercise in damp weather and be benefited by the fresh air, instead of suffering from undue exposure.

2. *Well-lighted, long cloakrooms*, in which the pupils may keep their wraps, and thru which they may pass in and out in regular order. It is very desirable that these should open in plain view of the teacher's desk.

3. *Sanitary lighting.*—The light should come in at the left side of the pupils and, on dark days, from the top of rear windows near the ceiling. (I think we have about come to the conclusion that light should be brought in over the left shoulder of the pupil.) The windows at the pupils' left side should reach to within a few inches of the ceiling, and should be grouped with as little space as possible between them. The best light comes in from the highest point. Blinds or dark shades should not be used. The narrow streaks of light admitted thru blinds are injurious to the eyes. The shades should roll upward from the bottom, and should be made of light-colored, translucent material. The windows in the rear of the room should not be more than a third the length of those at the side, should be placed as close as possible to the ceiling, and should be protected by curtains of light material that can be drawn *aside* on cloudy days as necessity demands.

4. *Pupils should be seated facing the main entrance.*—This will deter them from involuntarily turning around every time the front door opens, and has the added advantage of having the teacher near at hand when a visitor calls.

5. *A long, unbroken wall space*, giving the teacher and pupils plenty of blackboard for continued work. How frequently an otherwise well-appointed schoolroom has been spoiled by cutting up the walls so that the blackboard is all in patches! Long compact blackboards for class drill are indispensable for the best work.

6. *A library and teacher's room* directly connected with the schoolroom, where books and charts can be kept clean, and not be subjected to unusual wear and tear. This room, if needed, can be used for special study and as a recitation room.

7. *An exterior plan so arranged that three sides appear to be fronts.*—This adds to the beauty of the building and helps to prevent any controversy as to which way it should face, if situated where the roads cross.

8. *Sanitary heating and ventilation.*—The heating and ventilation system should furnish ample heat, evenly distributed thruout the schoolroom, should introduce fresh air in proportion to the actual needs of the pupils, and should draw off the foul air from near the floor thru a shaft or shafts properly heated for the purpose. There are two means of ventilation: (1) mechanical power applied to the forcing of air by fans; (2) the gravity system-ventilation by motion of air resulting from the difference in the specific gravity between the hot air and the cold. For our rural schools it is useless to consider the elaborate machinery of the fan system. We must content ourselves with the less scientific gravity system which, if properly installed and used, will greatly improve conditions for physical and mental development. In Massachusetts the law provides that schoolhouses shall be so constructed as to supply each pupil with 1,800 cubic feet of fresh air an hour. To comply with this law, the air of a schoolroom (30×24, with a 12-foot ceiling) must be changed every 9⅕ minutes, or six times every hour. Special provision should be made for drawing off the foul air from the cloakrooms, to prevent its contaminating the schoolroom. Every schoolroom should be provided with a fireplace, not only to add beauty and homelikeness to the room, but to take off the chill and dampness on those days when furnace heat is unnecessary, and in warmer weather to provide ventilation, which may be secured by heating the fireplace shaft with a lamp. Burrage and Bailey, in their work, *School Sanitation and Decoration*, in discussing this subject say:

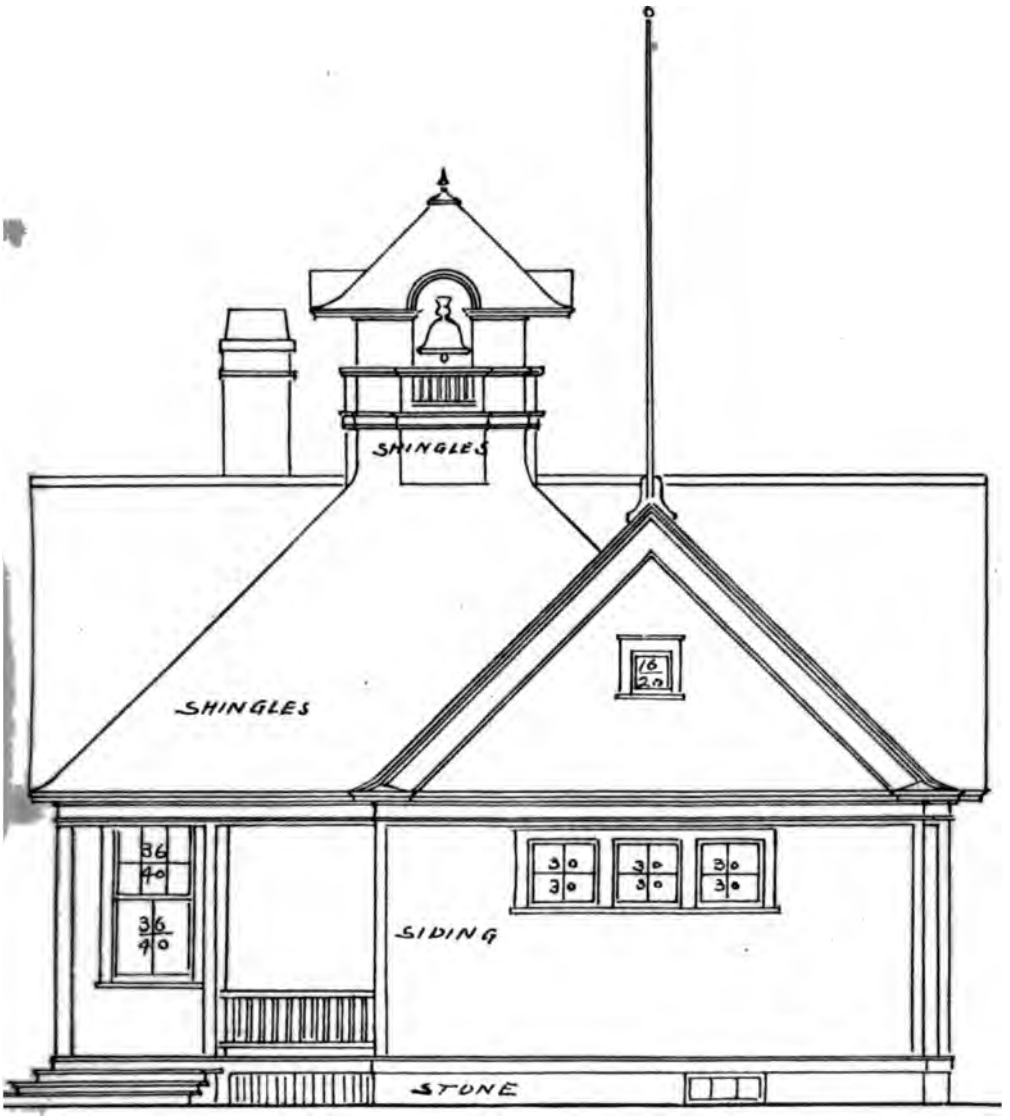
> Each school building requires a special study by itself. Two buildings constructed on exactly the same architectural plan might require entirely different heating and ventilating systems because of slightly different orientation or exposure.

This is true; but, as a general rule, I believe it advisable to have the fresh hot air introduced for the entire schoolroom from one place about eight feet from the floor near the center of the end wall that is least exposed. Let it sweep thru the schoolroom and return, to be drawn off from near the floor thru a foul-air exit under the hot-air intake. In a one-room country schoolhouse, where a responsible janitor cannot be in constant attendance, and where the fires must be looked after by the teacher, furnace heat from the basement is considered by some a doubtful good; it is maintained by them that more satisfactory results can be had from the right kind of stove with a proper ventilating system attached. (It is, however, to be borne in mind that provision must be made in any event for the admission of fresh air from without in such a way that it can be thoroly heated before it is thrown into circulation in the room, and for drawing off the foul air from near the floor thru a properly heated shaft.) In case the plans here submitted are followed (except that no basement be made), another room on the same side as the library and shop should be added for the fuel, and should be connected with the schoolroom proper by a door.

9. *The water-closets for the boys and girls should be separated*, should be of ample size, and should have each apartment divided into stalls. "In no case should the boys be exposed to one another when standing at the urinals." The passageway from the rear doors of the schoolhouse to the closets should be inclosed for the girls, so that they may not be unnecessarily exposed to the weather.

The cost of this building will depend upon local conditions. Some years ago when material was cheap, a building practically the same as this one, except that the porch was not provided (the inside measurements of the schoolroom being 23×33 feet, with a 12-foot ceiling; the library and teacher's office, 8×10; a fuel-room instead of the shop, 12×8; a 6-foot hall running across the front end of the building; no fireplace) cost for timber of good quality, carpenter's work, and everything complete above the foundation, except blackboards and furniture, $765, not including the hauling of the lumber from the station to the schoolhouse, which labor was contributed by the patrons of the district.

ONE ROOM SCHOOL BUILDING.



FRONT ELEVATION 5' 10' 15'

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Wisdom is justified of her children. Thoughtful men and women become impressed ith the unreason of such spelling, and little by little change their practice. Others follow, nfluenced by example. All is voluntary. Innovators and laggards alike are derided. 'he first spelling reformer who wrote *music* for *musick* was pronounced a crank. After a ime any who added the *k* were considered cranks. And so the reform has spread, never wiftly enough to pacify faddists, laughed at by the thoughtless, but not materially retarded y any of its opponents.

Ardent reformers fail to appreciate the difficulty which one wishing to spell well en- ounters in writing for different sets of readers. In making manuscript for one's own eyes, r to be read by a spelling reformer, one can with impunity spell well. Not so in working or the press or in miscellaneous correspondence. One rule in an exceedingly useful style- ook for proofreaders lying on my table bids: "Unless otherwise instructed, follow in spell- ng the authority in use in the office." People not proofreaders often, in effect, have to follow authority" in spelling. Even if not bound to do this, you may have drilled your- elf to certain forms so as to vary with difficulty. Then sometimes you fail to vary when ou would have liked to, and find you have offended a friend or lost a market for a nanuscript. Stenography adds its plague. Stenographers, of course, employ common- aw spelling. If you use a stenographer, you must follow custom in spelling, or else be ncessantly revising his work—a frightful task. These practical difficulties discourage nany proselytes, who, tho sighting a better life, continue in their sins.

Were one with a sense for sane spelling to write without reference to his readers, his pelling program would be simple enough. Remembering that a letter may be silent, nd yet of use to tell the sound of a near letter or to distinguish one sense of a word from nother, he would proceed according to precepts somewhat like these:

1. When a letter or combination of letters is in no sense helpful or necessary, leave out.

2. When a letter or combination differing from the usual one renders the sound better nan the usual one, substitute it for the usual one.

But such a program, simple as it is, would, if carried out all at once, produce odd and urprising changes, which, as so many of us write for non reformers and Philistines, would ive much offense and hinder progress in spelling instead of speeding it. Real reform nust, therefore, perforce, be moderate, not attempting too much at once. Advocacy of he use, forthwith, of many new spellings, or of spellings over which men pause to ascertain heir meanings, is the sign of the doctrinaire. A speller who, as a good beginning, simply rrites *tho*, and keeps the *ue* off *prolog* and its cognates, helps the cause much more.

To make the two rules workable, real measures of reform, I therefore saddle each ith the proviso that the new spelling must not in a context necessitate study or occasion oubt, uncertainty, or ambiguity respecting the word it denotes.

To determine whether a new spelling should be used in place of the old we should ask:

It will be seen that the essential features of the building may be retained, even if it be necessary to reduce its size and eliminate some of its conveniences.

I submit herewith plans also for a two-room building, in which I have tried to keep the advantages described, with the added one of throwing both schoolrooms into an auditorium. As the school should be a social center, it is well to have such a place where lectures, concerts, and other entertainments may be held.

The partition between the two schoolrooms is provided with counter-weights, so that it can be raised when necessary. This building also has a library and teachers' room directly connected with both rooms. As you will see from the elevation, the purpose is to locate it on a hillside, to make excavation and drainage easy. This, too, will make it comparatively easy for the building committee to have the basement as small or as large as funds will permit. The halls are light, and when the cloakroom doors are opened, the teachers can see practically clear thru them; while a stairway leads directly from the hall into the basement, thru which the girls may pass to the closets without undue exposure in severe weather. This is a modified form of a building put up in a rural district in Dakota County near the city of St. Paul, in 1899. It cost as follows:

Contract price	$2,285.26
Furnace	150.00
Slate blackboards	115.00
Desks and window shades	263.78
Total	$2,814.04

I trust that these plans may furnish suggestions or points for criticism that will enable the combined wisdom of this body to submit to the public better plans for rural schoolhouses than have hitherto been devised.

D. ROUND TABLE CONFERENCE ON SIMPLIFIED SPELLING

SIMPLER SPELLING: WHAT CAN BE MOST WISELY DONE TO HASTEN IT?

E. BENJAMIN ANDREWS, CHANCELLOR OF THE UNIVERSITY OF NEBRASKA, LINCOLN, NEBR.

We shall help spelling reform much by clearly explaining what it is not.

Unfortunately, reform spelling is often straightway identified with phonetic spelling. No alphabet ever popularly employed is complete. Till such is invented and introduced, silent letters must often be used. A letter itself silent may be needed to tell the sound of a neighboring letter. Instance the *a* in the present tense of *read*. A letter otherwise idle may be of value in distinguishing one sense of a word from another, like the *u* in *Saviour*, more specific than *savior*. The late Professor Whitney's retention of the *u* in *Saviour* in editing the *Century Dictionary* was wholly consistent with his position as a devotee of reform spelling.

Progress in orthography is hindered by what is understood as the "immediate emancipation" program. Many changes in the word-forms are desirable and ultimately possible which you cannot bring about today or this year. Crudities in spelling must be laid aside a few at a time. The late Francis A. Walker, an enthusiastic tariff reformer, lamented that the Wilson tariff bill attacked any other duty than that on wool. Introduce the wedge by its bit, he said. Many people quite willing to spell reasonably recoil before the philological societies' "Ten Rules."

Not a few find the reform ridiculous because of the assumption, which some of its champions appear to make, that if all crooked spelling were today straightened, characters perfectly representing sounds, reform would thus be achieved fully and forever. That would, of course, not follow. Human nature being what it is, the devil of bad spelling is

not cast out so easily. Whereas the sounds of words, being liquid, ever tend to change, the script forms of words, not being liquid, ever tend to fixity. But the fact that many reform spellings, if adopted, would in time themselves have to be reformed is no argument against endeavor to introduce them. If script can never be made perfectly to imitate sound, let not the gap between them widen to a chasm.

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1. When a letter or combination of letters is in no sense helpful or necessary, leave it out.
2. When a letter or combination differing from the usual one renders the sound better than the usual one, substitute it for the usual one.

But such a program, simple as it is, would, if carried out all at once, produce odd and surprising changes, which, as so many of us write for non reformers and Philistines, would give much offense and hinder progress in spelling instead of speeding it. Real reform must, therefore, perforce, be moderate, not attempting too much at once. Advocacy of the use, forthwith, of many new spellings, or of spellings over which men pause to ascertain their meanings, is the sign of the doctrinaire. A speller who, as a good beginning, simply writes *tho*, and keeps the *ue* off *prolog* and its cognates, helps the cause much more.

To make the two rules workable, real measures of reform, I therefore saddle each with the proviso that the new spelling must not in a context necessitate study or occasion doubt, uncertainty, or ambiguity respecting the word it denotes.

To determine whether a new spelling should be used in place of the old we should ask:

1. Is it more economical either (*a*) in the learning of it, or (*b*) in the using of it?

2. Would it, if employed in a context, involve ambiguity or occasion hesitation or study in respect to its meaning? If ambiguity is going to result, the spelling is not to be recommended, as it cannot prove a step in reform.

In spite of all vicissitudes, revision of English orthography has gone far of late and is progressing with rapidity. The most rabid foes of reform spelling use reform spellings.

Professor Peck himself writes *music* and *almanac*, never *musick* or *almanack*. Nearly all nice spellers, however conservative, have for years followed Soule and Wheeler's *Manual* instead of *Webster*. Few Americans longer tolerate *labour* or *honour*. Yet no rational argument can be adduced for printing *music*, *almanac*, *labor*, or *honor* in lieu of the older forms, which is not equally cogent for a thousand other improved spellings. Considerations of this nature affect scholarly and thoughtful men more and more. Manifestos by the Philological Society of England, the American Philological Association, and the Modern Language Association of America have also told.

The great influence of the National Educational Association of the United States is now cast in the same direction. We are no longer shocked to read *tho*, *altho*, *demagog*, *prolog* (and so all the compounds of *logos*), *thoro* (and its compounds), *thru*, *thruout*, and *program*. The non-use of final *e* in words like *hav*, *giv*, *ar* where it is not needed to lengthen the preceding vowel; the use of *f* for *ph*, as in *geography;* the omission of every silent *gh*, as in *bou(gh)* and ni(*gh*)*;* and the spellings *coud*, *sovrein*, (*w*)*hole*, *iland*, and *gastly*, will, most of them, be equally familiar. Most of these proposed innovations will be approved, and they will be gradually followed by others.

The study of great poets helps this movement, for, from Homer down, great poets have with much boldness trimmed the dress of words to suit sound and sense.

Any man with a voluminous correspondence is aware how widely these influences have wrought. Unless compelled by employers to do otherwise, the best proofreaders now spell *tho*, *altho*, *decalog*, etc., with the National Educational Association. They also say *controller*, *drajt*, *drouth*, or *drout*, *dulness*, *fulness*, *skilful*, *wilful*, and *bazar*. They use simple *e* for æ and œ ligatures in all fully Anglicized words, even proper names (as *Cesar*), and follow good usage against the dictionaries when the two are at variance. Remembering the *via dolorosa* of reforms in general, and the rough riding which this reform in particular has had to encounter, one must pronounce its victories in recent years fairly satisfactory.

We can gain much by pointing out on proper occasions how vapid the logic of our opponent is.

Arguments against reform in spelling, as distinguished from arguments against a special spelling, or against this or that effort to introduce the reform, are ridiculously weak. One editor solemnly warns booksellers that, were the new spelling to prevail, all present literature would have to be reprinted. Could extant books be buried so easily, all being disused which could not get themselves reprinted, such a chance of doing good would swell spelling-reformers' ranks by a host. But all who know how easy it is to read Chaucer see at once that the assumption is idle.

Anti-reformers appeal to the sacredness of usage. "Spare the spelling of the fathers!" But not a man who pleads thus uses the spelling of the fathers. To do that you would be compelled to put down *ayre* for air, *cuppe* for cup, *fysche* for fish, *sunne* for sun, *howse* for house, *trewe* for true, and so on. The spellings urged in opposition to proposed revisions are usually not old or reversed at all, but hail from yesterday. Says Max Müller:

> We have only to go back a very short way in order to see the modern upstart character of what is called historical spelling. We now write *pleasure*, *measure*, and *feather*, but not very long ago, in Spenser's time, those words were spelled *plesure*, *mesure*, *fether*. Again, *tung* (AS. *tunge*, German *Zunge*) and *yung* (AS. *jung*, *geong*, German *jung*), as spelled by Spenser, have a more historical aspect than *tongue* and *young*. . . . . The two strongest arguments, therefore, against phonetic spelling, that it would destroy the historical and etymological character of the English language, are, after all, but very partially true and

I believe that, taken as a whole, the loss occasioned by consistent phonetic spelling would hardly be greater than the gain.

Professor Skeat is "convinced that the chief argument in favor of present spelling, viz., 'that it preserves the etymology,' woefully breaks down when carefully examined." He adds: "In the interest of etymology alone, I wish that the present spelling might be utterly smasht. . . . . It is impossible to enumerate all the numerous anomalies which the disastrous attempt to make etymology *visible* has introduced."

Language exists not for etymologists' sake, but to aid communication. It is, however, pertinent to notice that the origin, history, and real meanings of words are in most cases far clearer when their useless letters are laid aside. *Program*, *labor*, *prolog*, and *colleag* are examples.

What anti-reformers usually have in mind as etymology is something far different. The burdening, for instance, of *humor* with a supernumerary *u* is no etymological affair. Originating as a Gallicism, it is now in effect a freak of ignorance, like the "Linkun" for Lincoln written by some of President Lincoln's ancestors, simply because they did not know any better. It cannot be denied that freak spellings possess a certain sort of historical value, showing how funnily ignorance and conceit may manifest themselves, as the highfalutin rhetoric and false historical references of old writers do. But this is surely no reason why hunchback and varicose forms of words should be continued. As well perpetuate in use antique firearms, clothing, tools, wagons, and ships! *Abhominable* would certainly teach a little etymology, but who would put in the *h* on that account? It would be abominable.

Sam Walter Foss' poem entitled "The Calf-Path" has already been cited against anti-reformers, but will bear repeating in the same interest.

One day thru the primeval wood
A calf walked home, as good calves should.

But made a trail all bent askew,
A crooked trail, as all calves do.

Since then two hundred years have fled,
And I, infer, the calf is dead.

But still he left behind his trail,
And thereby hangs my moral tale.

The trail was taken up next day
By a lone dog that passed that way;

And then a wise bell-wether sheep
Pursued the trail o'er vale and steep,

And drew the flock behind him, too,
As good bell-wethers always do.

And from that day, o'er hill and glade,
Thru those old woods a path was made,

And many men wound in and out,
And dodged and turned and bent about,

And uttered words of righteous wrath,
Because 'twas such a crooked path.

But still they followed—do not laugh—
The first migrations of that calf,

And thru this winding wood-way stalked
Because he wobbled when he walked.

This forest path became a lane,
That bent and turned and turned again;

This crooked lane became a road,
Where many a poor horse, with his load,

Toiled on beneath the burning sun,
And traveled some three miles in one.

And thus a century and a half
They trod the footsteps of that calf.

The years passed on in swiftness fleet,
The road became a village street,

And this, before men were aware,
A city's crowded thorofare,

And soon the central street was this
Of a renowned metropolis.

And men two centuries and a half
Trod in the footsteps of that calf.

Each day a hundred thousand rout
Followed the zigzag calf about;

And o'er his crooked journey went
The traffic of a continent.

A hundred thousand men were led
By one calf near three centuries dead.

They followed still his crooked way,
And lost one hundred years a day.

For thus such reverence is lent
To well-established precedent.

A moral lesson this might teach,
Were I ordained and called to preach.

For men are prone to go it blind
Along the calf-paths of the mind,

And work away from sun to sun
To do what other men have done.

They follow in the beaten track,
And out and in, and forth and back,

And still their devious course pursue,
To keep the path that others do.

But how the wise old wood-gods laugh,
Who first saw the primeval calf:

Ah! many things this tale might teach—
But I am not ordained to preach.

Of course, reformers' last and chief resort is the positive argument in favor of simpler spelling.

If spelling reform be understood as a sober propaganda to effect in time, by those gradual changes which alone can be expected, the closest desirable parallelism between the correct sounds of words and their written and printed forms, the argument for the reform is imposingly strong. Serious people, who can be induced really to consider it, will not dismiss it as a fad fussed into notice by the idle, the thoughtless, and the queer.

Why do men write or print at all? Is it not that they may communicate thought? This is the final cause of all speech. Whatever on the whole ministers to this end is good, and ought to be encouraged. Any method of writing, on the other hand, which hinders communication, puts friction into it, makes it awkward, cumbrous, needlessly consumptive of time, or in any way detracts from its efficiency, is an evil to be abated. We do not write to preserve the history of speech, still less to publish the whims or ignorance of obtuse printers in past ages, but to be understood here and now. To say the reverse or to go upon any other principle is pedantry. Turgid spelling, the weighting of words with idle letters, is no more justifiable than pleonasm, verbiage, or tautology in rhetoric.

THE EVILS OF TRADITIONAL SPELLING

Nothing is more certain than that the current spelling of our tongue needlessly clogs communication, needlessly interrupts the flow of thought between human beings. It renders writing and printing 10 per cent. unnecessarily slow, laborious, and expensive, inevitably lessening to a great extent the use of these invaluable devices. It obstructs reading, prolongs the time necessary for a given amount thereof, and wastes eyesight power. In this way again the usefulness of reading is seriously restricted in scope. The force of this point may be easily tested. Let a person acquainted with English and equally so with Italian (whose spelling closely follows sound) try the two languages, printed in type of a given size, in a very dim light. He will find the Italian a great deal the easier to make out.

A consideration of moment quite independent of the above is the waste of time involved in learning the traditional spelling. The estimate that this amounts to two years in educated persons' average school life seems to me within bounds. Here is the chief reason why American youth of eighteen, constantly in school since they were six, average to be in studies two years behind German and French students of the same age likewise in school since six. The foreign boy, that is, has learned in ten years as much as the American in twelve. French print, too, has its useless letters, but they occur according to a method which keeps them from balking the learner as ours do.

Spelling is not alone at fault in the above matter, for there are other particulars wherein our pedagogy is behind Europe's best. But the defect is mainly due, directly or indirectly, to our difficult spelling. The evil reaches the latest school years, inferior composition being among its baneful sequels. Every teacher charged with the correction of juveniles' manuscripts bewails the precious hours he must spend in amending orthography, which, were this unnecessary, he might devote to promoting literary power.

I reckon that thoro spelling reform would each year save about 10 per cent. of the English-speaking world's printing bill. The work of proofreading would be reduced more than this. I think half of it would be saved. The cost of composition, ink, paper, press-work and power therefor, electrotyping and the interest of capital invested in printing would each be extensively lessened. I have at hand no means of computing the

aggregate which useful economy in spelling would thus yearly add to the world's wealth, but it would clearly reach millions.

A needless drain would be stopped in the schooling of the young. One of the two school years above described as practically sacrificed to bad spelling between the ages of six and eighteen is lost in the first eight years of this time. With amended spelling the eighth year the entire cost of the eighth grade could be eliminated, pupils learning as much in seven years as now in eight. Upon a rough computation, in which the cost of land and buildings is ignored, I make out that by carrying its elementary schooling thru seven grades only, and canceling the eighth, Chicago could save not less than 4 per cent. of what the present eight-grade system costs. The lessened amount necessary for land, buildings, and high-school expenses would certainly swell the saving to 5 per cent.

This percentage might be expected to amount to a considerably higher figure but for the following reason, which shows that it is impossible to separate this economic consideration from the pedagogical one. Sane spelling, by cutting off a year from the elementary-school course, would very considerably increase the proportion of the pupils who complete that course and the proportion who press on into and thru the high school, thus enabling the school system to accomplish its end much more completely than now.

Suppose the percentage of reduction by this means suggested to be but 5 per cent., the yearly saving effected by Chicago, with a population of, say, two million, would approximate three hundred thousand dollars—enough to make a sensible addition to teachers' wages. At the same rate a nation of eighty million would save yearly twelve million dollars. This figure relates only to the public or common schools. For all the schools, academies, colleges, and universities of every kind in a nation of eighty million it would probably rise to fifteen million dollars or more.

To make the above remarks practical, I beg leave to move as follows:

Resolved, That the Department of Superintendence be recommended to overture the National Educational Association to order the twelve forms "bizness," "enuf," "fether," "mesure," "plesure," "red" (past tense of *read*), "ruf," "trawf," "tru," "tuf," "tung," "yung," used hereafter in all its publications instead of the longer forms now used.

Resolved, That the Department of Superintendence be recommended to urge that superintendents advise their teachers that in appraising pupils' work words spelled after the styles of the National Educational Association be not considered misspelled.

WHAT CAN MOST WISELY BE DONE TO HASTEN SIMPLER SPELLING?

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A brief answer to this question may safely be offered in the reply: At the outset, it were certainly most wise to endeavor to profit by the hard experience of the past. Inasmuch as this problem has presented itself for generations in many countries, notably in England, France, and Germany, there is considerable experience to draw from. Moreover, the present moment appears particularly opportune for continuing to enlist public interest, for the subject has received of late an unusual amount of attention at home and abroad. Japan is on the eve of adopting a phonetic alphabet of Roman letters. In Germany the university men and the magazine writers are bringing strong influence in the direction of common-sense to bear upon the written language. This is seen particularly in the adoption more and more of Roman type instead of the German in printing, and in the suppression of capital letters in the spelling of common nouns. Useless letters are being gradually driven out; for example, the words for *animal*, *worth*, and *red* are no longer spelled with an *h* as formerly, but, respectively, *tier*, *wert*, *rot*. Tradition, prejudice, and conservatism offer formidable opposition to such innovations; yet, notwithstanding, something in the way of simplification is gradually being accomplished.

France has been aroused as never before by the report of the learned commission

The main object desired, then, is not merely an alphabet—because there are scores of them and good ones—but an alphabet *that will be used*. The stress is emphatically upon the *will be used*. For the past four centuries, alphabets have been invented and treatises written in the orthography of the inventor. These alphabets have been singularly unsuccessful in gaining the attention of the public. Nevertheless, the ardor of inventors who continue to offer phonetic alphabets has in no wise diminished. The stress has always been placed on perfection instead of utility. In the nature of the case, perfection is an impossibility. What alphabet, however restricted, is perfect? In the solution of this problem, perfection is a relative factor, whose importance has been so magnified as to nullify almost completely, up to the present time, the end in view. In a certain sense, it may be said, the more perfect the alphabet, the less its utility. Consequently, alphabets for specific needs have but few who use them. The climax of the quest for absolute accuracy is reached when each dictionary employs a key of its own.

In this country there are three main objects for which a phonetic alphabet is useful: (1) as a key in dictionaries; (2) in dialect research; (3) in class work in languages, particularly French.

The first use of a phonetic alphabet, as a key to pronunciation, in dictionaries, is so obvious that it is needless here to say more. Let it suffice to say, in regard to the second use, that of dialect research, that there is sufficient work of that character done in this country to justify the existence of the American Dialect Society. It is in the third use, that of language work in classes, that the use of a phonetic alphabet is most clearly shown. It is here, too, that its ultimate influence in hastening simplicity in spelling is likely to make itself most felt. At the present time, for example, a certain French grammar indicating the pronunciation by means of the symbols of the International Phonetic Association is very widely used thruout the United States and Canada. The meaning of this statement is that now thousands of children are familiarizing themselves with this system of indicating pronunciation. Moreover, a whole series of international dictionaries with this same system of figured pronunciation is in process of publication. The volume French-English and English-French has already appeared, and is being much used in school, college, and library work. This statement, like the preceding, is significant.

Aware of what has been done in the past, as well as of what is now taking place, it is the belief of the promoters of the Boston University movement that what can most wisely be done to hasten simpler spelling is, first and foremost, the avoidance of the repetition of the experience of the past. Instead, then, of adding to the numerous phonetic alphabets already in existence by inventing a new one, take the one already most widely used thruout the world for the purposes just enumerated, and use it for just such purposes. The experience of four centuries shows that any new system, be it ideal if you will, simply has to take its chances with all the others already awaiting recognition and go thru precisely the same vicissitudes.

Of the scores of existing phonetic alphabets, there is one that is decidedly in the van. This well-known method is being used more widely than ever, not only on the continent and in England, but in this country. It employs the phonetic transcription of the International Association. At present, in different countries, there are published more than one hundred books in which this uniform alphabet is used. Some of these works have had a very large sale, spreading the system far and wide: the Passy-Rambeau *Chrestomathie Française*, the best-known book of the kind in this country, and the most generally used of the works on French phonetics; Miss Soames's book in England; the Passy books in France; Rossmann and Schmidt in Germany; the Fraser and Squair *French Grammar* in this country; and also a set of international dictionaries of foreign languages published by Hinds, Noble & Eldredge in New York. The Fraser and Squair *Grammar* has been widely used thruout the United States and Canada, and is today the most effective means of introducing the system of the International Association to the rising generation.

ordinarily, by so doing, accomplishing something in the direction of simplification of spelling. On August 26, 1904, Boston University, complying with a request indorsed by some 120 prominent men, issued a preliminary circular inviting opinions on the proposal to hold an international phonetic conference for the purpose of adopting a universal alphabet to serve as a key to pronunciation in dictionaries and standard works of reference. Briefly summarized, the need of such an alphabet was explained as follows: As a matter of necessity, every important dictionary uses a key to pronunciation, but, owing to the multiplicity of keys, not one of them becomes familiar to the public; on the contrary, the number and divergence of these keys render them for the majority of students practically useless. There is no satisfactory reason why Murray's *English Dictionary* should use one system for indicating pronunciation, the *Century Dictionary* another, and *Webster* and *Worcester* still another. That is, there is no good reason why all these dictionaries should not use the same key to pronunciation. Moreover, there is no adequate reason why the letters comprising that key should not have such form as would be convenient also for ordinary writing and printing. Such a universal key to pronunciation would at once establish a universally recognized phonetic spelling. Students of foreign languages would find it convenient to have the pronunciation indicated to them by letters with which they were already familiar. The system once introduced in all dictionaries would soon be used in manuals, primers, and in all books in which it is desirable to indicate pronunciation.

The criticisms to the movement for a universal alphabet, together with the replies thereto, will be found in the Circular Inviting Opinions issued in 1905 by the Boston University. Let it suffice here to say, in reply to the objection that the scheme is impractical: Look at the extensive use to which the alphabet of the International Association is already put for every kind of purpose here and abroad. The reply to the objection that such an alphabet, in the nature of the case, must be cumbersome is that the average student has no occasion to use all the signs, and generally uses but a few more than he is obliged to in transcribing his native tongue. Practically, instead of being applied to all languages, as the name "universal" would imply, the alphabet would largely serve its purpose in its application to English, French, German, Italian, and Spanish. The three last-named tongues being written far more phonetically than either English or French, the alphabet would have its greatest practical bearing upon these two unphonetic tongues. A uniform system once generally recognized for indicating the pronunciation of these five world-languages would make its influence felt upon other languages in the direction of their conformity to the universal, or world alphabet.

Thousands of children who are now growing up and receiving a good education are taught not only the essentials of one foreign language, but of two, or even three—Latin, French, and German. Phonetics is not a fad in language study; it has come to stay. The principles involved in acquiring the sounds of any language are the same.

In Norway, Sweden, Denmark, Germany, France, and England, phonetic transcription in acquiring the sounds of language is being used more widely than ever. Modern civilization is rendering us every day more cosmopolitan, more international. Why, then, should a child first learn a phonetic spelling for English, another for Latin, a third for French, and still another for German? Such a method is confusing, and leads to the same senseless result obtained by the divergent dictionary keys—each one serving to efface the other. In a word, what is most wanted is not a particular system adapted to special needs, but a uniform phonetic transcription that scholars everywhere will use for popular scientific purposes. Such a universal system will not only accomplish its object, but will in so doing illustrate as never before the value of the science of phonetics.

Introduced into geographical, scientific, and language works, in which pronunication is usually indicated, the rising generation, continually in touch with the system thru primers and manuals, will get into the habit of using that alphabet whenever they have occasion to indicate pronunciation. They will become familiar with the phonetic spelling as well as with the traditional.

from Professor Calvin Thomas suggesting that the National Educational Association cause a spelling primer to be made and offered to primary schools with its sanction.

PRESIDENT CHARLES MCKINNEY, of the State Normal School, Milwaukee, Wis., reported on some investigations made for the purpose of learning to what extent the educational journals of the country are using the N. E. A. simplified spelling list, and whether they would agree to use a more extended list if it were offered. Somewhat more than a fourth of all such journals now use all of the list, about one-half use only a portion of it, and a fourth say that they are opposed to it. He suggested that persons present might aid the cause by efforts to induce their state educational journals to use the N. E. A. list.

W. T. HARRIS, U. S. Commissioner of Education, commended Chancellor Andrews' paper and Professor Hempl's remarks, and cautioned against too much haste in the cause. He said that real advance in the cause will be made only when the children in some school begin to use the list, and when a pronouncing alphabet has been made and accepted.

THE INCORRIGIBLE CHILD

MISS JULIA RICHMAN, DISTRICT SUPERINTENDENT OF SCHOOLS, NEW YORK CITY

The incorrigible child makes me think of the story of a band of street boys, one of whom had a big apple and was eating it alone. Six pairs of eyes, hungry and envious, watched him sadly. One lad, at last, could contain himself no longer: "Say, Dick," he burst out, "will yer gimme de core?" Between bites, Dick replied: "Dere ain't goin' ter be no core."

"Dere ain't goin' ter be no incorrigible child," ladies and gentlemen, when we shall have come to see that every child, properly understood and properly trained, is "good to the core." I need not define the incorrigible child. We all know him as the child that hates school, torments the teacher, demoralizes the class, disobeys the rules, and defies authority—even the laws of the state. He is present in every school, and, if reports may be relied upon, is present in ever-increasing numbers. He it is who is responsible for the nervousness and breakdown of many a teacher who succumbs to his torments. He it is who burdens and weights down the best of teachers by his presence in the class. He it is who robs the rest of the class of time and instruction by his drafts upon the energy and patience of the teacher. But "with all his faults, I love him still."

I have seen and am seeing the incorrigible boy at his worst—in a section of the congested East Side of New York City, where over twenty-five thousand school children, of both sexes, are housed within an area of less than half a square mile. For many years school accommodations in this section of the great metropolis have been inadequate. Even now, after eight years of constant effort on the part of recent boards of education, the number of schools is not equal to the needs of the district. For many years children had been kept upon a waiting list, or sent away from school, because there was "no room." The compulsory-education law could not be enforced, because there was no school place for the non-attendant. Have you any idea of what happens to the boy of the tenements, if he is left on the streets for a year or two? Take

he history of the boys committed to city or penal institutions during the last en years, and you will learn. Read the biography of the city's professional safer, and you will find out. The boy kept out of school gets his education n the streets, and graduates in loaferism, gambling, and burglary by the me he is fourteen. This has been the fate of many hundreds of boys, ruined r life because of administrative niggardliness, or because of the official ickedness of those teachers and principals who attempt to maintain discipline by driving the troublesome boys out of school. But this condition has one by in New York. "Compulsory truancy" is a thing of the past, because very child must now attend school, even tho for the younger children in some ections, owing to the lack of accommodations, only part-time instruction can e afforded. In consequence of better administrative methods, hundreds of hildren, mainly boys, have been brought into the schools, lawless, undisciplined, untutored; fitted by age and size for the middle and upper grammar rades, unfitted in book-learning for any but the lowest primary classes; norant as new-born babes of all that the course of study demands; wise as eterans in all street shrewdness and knowledge of the seamy side of life. ntroduce five or six of these street arabs into any class, and can you not resee the result? Tired, discouraged teachers must refer extreme cases of iscipline to the principal; tired, discouraged principals must give valuable me and their best energies to the investigation and treatment of the acts of elinquents. Add to these internal burdens the additional one of the boy aroled by the children's court; the boy known to be a thief; the boy known y his classmates to have been arrested; the boy known by his confederates o have been sent back to school unpunished; the boy whose answer to the uestion, "What did they do to you in court?" is, "Oh, nuttin'; de judge est talked soft ter me"—and the result is disheartening.

The incorrigible child, now counted by the score, must soon be counted y the hundred, unless remedial and preventive measures can be immediately pplied. On the one hand, there are the boys already bad, who must be eclaimed; on the other hand, there are the boys not yet corrupted, who nust be saved. In every class there are children several years beyond the ge for which the regular grade work is designed. Think of the effect upon the oy of twelve or fourteen who, having spent years upon the street peddling, ambling, and often stealing, is forced to attend school with forty, or fifty, r sixty little fellows of six or seven, and compelled to repeat with them, 'One apple and two apples are three apples!" Think, too, of the effect upon hese six- or seven-year-old babes of associating with the boy who swears, ambles, and smokes, and who has eaten of the fruit of the tree of knowldge, of less good than evil. Let me say right here that the first-year classes re meant for the babes, and the second-year classes for those a bit older; and he child of ten or eleven or twelve or older has no place in the regular classes f the first three years, no matter how ignorant he may be of reading, writing, r arithmetic. Such a classification of the older boy has a bad subjective

influence upon him, and a correspondingly bad objective influence upon the child for whom the grade work was planned.

My first recommendation, therefore, to meet these conditions, is the formation of special classes for the children over age. It will be found that, with few exceptions—so few as to be almost a negligible quantity—the incorrigible child will find his way into the special class, which at once relieves the regular classes of the most objectionable material. The teachers for special classes must obviously be selected with great care, in order to secure for these backward children the teaching power and the sympathy and the encouragement necessary to bring them forward more rapidly than is possible in the regular classes. The so-called non-essential studies should be taken from the course, and the teacher's whole energy devoted to carrying the children on to meet the academic requirements of the child-labor law. Much attention, too, should be given to physical training. Promotion from group to group and from class to class should be promised, and given at any time that progress is evident, and each child should be made to understand that this special grading is solely for his benefit. In New York this experiment showed good results from the beginning. Many a boy, responding for the first time to a real interest in his welfare, began to realize the importance of trying to please his teacher; and later not only showed interest in his work, but a real desire to learn. Many of these boys, who had been, or were destined to become, incorrigible under the old classification, were saved by being placed where work was provided suited to their years and ability, and where an earnest teacher was willing and able to give them the individual help and encouragement they needed.

The formation of special classes helped much, but it did not solve all the difficulties. The incorrigible child and the chronic truant were still too much in evidence. The former, after having had a fair trial under at least two teachers, was officially suspended by the principal. To have returned to his old school, a suspended boy, whether sinned against or sinning, would not only have had a bad effect upon other children, but it would have made it difficult for the delinquent to do his best. There is much truth in the old adage: "Give a dog a bad name and hang him." The transfer to another school was accompanied by a warning that a second suspension would result in commitment to the truant or parental school—a threat invariably executed. The principal of the school whither the boy was transferred, was made acquainted with the circumstances, and the boy placed, if possible, in the class of a good teacher. He was also placed on parole to the district superintendent, at whose office he was compelled to report every Saturday, bringing with him a record of daily attendance and conduct. In like manner, all chronic truants, and all children placed on probation by the children's court, were compelled to report to the district superintendent. A word of praise, a word of admonishment, a moment's friendly conversation, the loan or gift of a book, a ticket to a ball game or some good entertainment—these things

give the superintendent a hold upon paroled boys, and a claim which most of them will recognize. In my experience, several got to a point where they would polish their shoes, smooth their hair, and wear collars, when they came to see me. I did not always talk "soft." When a boy deserved a scolding, he got it; and he respected me all the more for it, so long as I "played fair." It is "playing fair" that wins a boy's heart. On one occasion I gave a letter to a paroled boy who had removed. In this letter I asked the principal of an up-town school to place Harry in the class of a teacher who would encourage him when he tried to do what was right. I read the letter to the boy and asked: "Do you know what I mean by that, Harry?" "Yes, you mean a teacher who won't holler at me for every little thing." It is the teacher who "hollers" at a boy or class "for every little thing" that helps to make the incorrigible child. If only all teachers could be taught to "play fair"!

The chronic truant gives much trouble. There are many causes which lead to truancy, and scientific treatment will eradicate much of the evil. The subject, however, merits a chapter of its own. "The call of the street" is irresistible to some boys. After two or three attempts on the part of the attendance officers to keep a truant at school, the parent and child are summoned to appear before the district superintendent. If upon investigation it appears that the parent is to blame, the case is dismissed upon the understanding that following the next offense the matter will be taken before a magistrate, with a request that he impose a fine upon the parent. If, owing to lack of parental control, the blame rests solely upon the boy, he is warned, placed upon parole, and upon a repetition of the truancy is committed to the truant school.

Unfortunately, the capacity of the two truant schools in New York is only about one hundred and eighty. With a school population of over half a million, such an equipment is absurdly inadequate. Better accommodations are under way, but some of our troubles past and present are due to this inadequacy. It takes but a few weeks after the opening of the fall term to fill the truant schools; then follow other trials and commitments. In order to accommodate the newer commitments, vacancies in the truant school must be created, either by returning a good boy to his home or by sending an exceedingly troublesome one to some reformatory institution. This is the weakest and wickedest part of the truancy system. The boy sent home too soon invariably has a relapse. The boy sent to a correctional institution, after some months usually comes back wholly corrupted. Intimate association with boys worse than himself corrupts the individual boy to a point almost beyond redemption. Last spring the removal from our city of one great institution sent about a thousand children back to their homes. All under fourteen were ordered to attend school. Many of these became the most demoralizing element in the schools, and within two months the majority of those sent to my district had to be recommitted, either thru the children's

court or thru my office. Unfortunately, however, before their recommitment they had organized their own little gangs, and had started other lads on the evil road. Many of my paroled boys, perhaps more weak than wicked, attracted by the strong personality of one or another of these young law-breakers, drifted into evil ways, and arrest often followed. For a time last spring it seeemd as tho all our efforts, which for many months had been unremitting, had proved futile; complaints from the schools became more frequent; discouragement met us at every turn. The heaviest burdens were directly traceable to the "ticket-of-leave" boys from correctional institutions. With this absolute knowledge in my possession, there came a determination to keep my boys, even my "incorrigibles," out of all institutions if possible, and to try to bring about reform in some other way. It was easy to determine that I should recommend no more for commitment; but what could I do with the bad boy? To turn him adrift was out of the question; to keep him in the regular school was equally out of the question; I would not send him to the truant school; consequently a special school was needed.

Our school board authorized the establishment of a special school for truant and incorrigible boys, using for the purpose a small, old-fashioned school building in my district. (The bad girl must be differently dealt with, and before long something definite, I trust, may be undertaken for her reclamation.) Altho this special school was designed solely for the most undesirable material in the regular schools, it was deemed ill-advised to stigmatize it by giving it a name which might carry with it offense either to the children enrolled or to their parents. Therefore it goes by its old name, Public School 120, under the same general management and supervision as the regular elementary schools.

It was, of course, essential that no mistake be made in the choice of a principal. Not only was it necessary to find some one fitted to do this delicate and important work; it was quite as necessary that he or she should be willing to undertake a task so beset with trials and opportunities for discouragement. Thank God that among the men and women in our profession there are not a few of the class whom Matthew Arnold characterizes as "divinely touched," and a more capable, patient, earnest, loyal, God-serving group of men and women than forms the teaching force of Public School No. 120 it would be hard to find. The school was organized about the middle of last October. The pupils were taken from a new and novel kind of eligible list. Every principal within my districts was directed to make a list of the most serious discipline cases among the boys in his or her school, writing out a short history of each case, and arranging the list in the order of demerit—the worst boy at the top. I shall never forget the impression made upon me upon my first visit to that school. About sixty boys, every one of them with a history; hardness, mistrust, ugliness, written on almost every face; a latent desire to resist authority in every heart—it seemed to me as tho I had done a cruel thing in loading such a responsibility upon the principal and her teachers.

That was four months ago. Today those same boys, and others of their kind, who have since been sent to the school, are growing more and more susceptible to good influences; and I believe that from their ranks there will come boys so clearly and definitely started in the right way that many of them will develop into respectable citizens, if not even successful men. The majority of the boys, altho averaging thirteen years of age, were absolutely unfitted for intellectual work of any kind. Some could not write their names; some could not work the simplest examples; most were chronic truants; almost all were cigarette-smokers and crap-shooters; most were liars; many were known to be thieves; profanity rolled from almost every pair of lips. One feeling, however, was strong within me: that whatever might be the effect upon the boys, the teachers, or the principal of this school, the effect upon the regular schools, brought about by the removal of this element, must be tremendously helpful.

Every incentive was offered to make the school attractive. Academic requirements were kept in the background, until respect for the teacher, respect for authority, and self-respect had been, in part at least, developed. The school was a boon to those boys: boys who had been driven from pillar to post; boys who had been the disturbing influence in their classes; boys who had been beaten by their parents with or without cause; boys who had been run down by the police—the veritable pariahs of school life. Have you any idea what it means to such a boy suddenly to find himself under an influence so directed that he discovers that he is of interest to somebody; that someone cares for him; that when he tries, someone is pleased; that when he backslides, someone is grieved. This is what many of those boys found for the first time; and, under the sunshine of friendly interest and thoughtful care, some of the hardness that had grown about the tender spot which can be found in almost every boy's heart began to soften and to melt; as the soft spot showed its presence, the skillful teacher, tenderly, carefully, prayerfully, kept on melting the hard outer crust and giving the warm spot encouragement to develop; and as the heart grew warm, something in the face changed. The hard, sullen, rebellious look disappears at times; occasionally there is the light of hope on the face; in a few cases the old look has entirely disappeared. Some day some of these boys, who but for this influence in their lives would have found their way into the House of Refuge, and into other hotbeds of vice and iniquity, will be able to hold up their heads as honest, decent, law-abiding citizens. Can any greater reward come to the teacher than the knowledge that he or she has achieved this?

Success has not come in every case. One boy has already had to be given up as hopeless, not only because he would not lend himself to any of the good influences at work, but because his influence over the other boys was so terribly demoralizing that for their sakes he had to be removed. His case was referred to the Children's Society. Another boy had to be sent to an asylum for mental defectives. Five or six have been lost to us because

of criminal conduct outside of school, which led to their arrest and commitment by the court. Some were sent back to the regular schools at the beginning of the February term, pronounced absolutely cured by their teachers and principal. Several were carefully prepared to meet the academic requirements of the child-labor law, and they have gone out to work now properly qualified and properly certificated. In some of these cases the boys were carried forward thru the essentials of three or four regular grades. Many of them had keen minds and needed merely to be shown how, and to be encouraged, to enable them to make astonishing progress. The boys are proud of their school, and in most cases a class pride has enabled them to make effort that was impossible to the individual child.

Considerable attention has been given to physical training and athletic development. One of the most astonishing phases of this work was disclosed when these boys, who had lived their lives on the street, were found to be absolutely unable to do regular physical exercises. They seemed to be utterly without muscular development; the simplest physical tasks seemed beyond them. They were awkward, unwieldy, and heavy-footed. The change in this direction has been marked. A basket-ball team was organized soon after the opening of the school, and the boys have learned how to do creditable team work. Their team had been practicing less than six weeks when they asked permission to compete in an interschool contest in the district. They were of course beaten, because the other teams had been in practice for many months. They took their defeat amiably, but demanded that they should be taught a school cry of their own, because the winning team had its school cry.

Many incidents might be here recorded, but for lack of time I shall narrate only one.

Philip, thirteen years of age, was placed high upon the eligible list at the time that the school was opened. He was a chronic truant, and at the time of his transfer was a vagrant, not having slept at home for some time. It took two attendance officers and two teachers three weeks to find the boy and bring him into school. He remained about two hours and then ran out, and was gone for another week. Finally he was brought back again, and this time he remained. About four weeks later, during which time he had not once played truant, and in several other ways had shown a desire to do well, he went into the principal's office, where the following conversation took place:

Boy: Say, Miss Jones, there's two fellers on my street what don't go ter school. If I make 'em come, will yer take 'em in?

Principal: Why don't they go to school?

Boy: They ain't been in no school for a long while.

Principal: Where did they use to go to school?

Boy: They didn't go ter no public, they went ter de Brudder's. Say, Miss Jones, won't yer take 'em in if I make 'em come?

Principal: You can't make them come.

Boy: Now, never yer mind what I can do. Will yer take 'em in if I make 'em come?

Principal: I'll take them.

And he went off. Next morning he came into Miss Jones' office and literally threw two boys at her, having brought them into the school holding each by the collar. Their

home was fully half a mile from the school. "Here's them two fellers. Didn't I tell yer I could bring 'em?" And he had. The two boys in question, upon investigation, were found to have been away from school for seven months, spending their entire time upon the street. They were at first irregular in attendance, but two or three visits to the home of the grandmother, with whom they lived, and a rather sharp letter to the father, brought about reform in this direction, and they are now attending regularly.

I leave it to the psychologist to discover what was Philip's motive in bringing these two boys into the fold. In my optimistic moods I like to believe that, having felt the good influence of the school, he wished his friends to share that influence; but there are other times when I think a feeling of envy that these boys could be on the street while he was at work may have been the dominating force. However, this is not the time to analyze motives. Three chronic truants are now attending regularly, and that in itself is justification enough for the existence of such a school as the one I have described.

One of the teachers in this special school told me that he never hesitated to talk to the boys about their bad reputation:

> They knew that they were bad boys, and they knew that I knew it. By comparing the results of honest life and earnest work with the results of dishonesty and idleness, I aroused a slight spirit of shame and hurt pride, and, I believe, created a little desire to do right. I appealed at first to the material side of every question of right and wrong. I talked dollars and cents as the result of work, and the lack of them as a consequence of neglect. The response was astonishing. Later, after I had gained a fair control of the class and developed some spirit of right-doing by simple talks, I tried to get the boys to do right because they wished to do so. Having grown up in New York streets myself, I am "wise" to everything they do. I astonish them a little by a few stories about the street, and make them understand that they are wasting time when they try to lie to me. In consequence they have stopped lying, and now only exaggerate. The gymnasium and shop raised high hopes of having a fine time. These hopes were turned to use, and the boys were led to accomplishing set tasks. Their predominating characteristics are personal pride and a supersensitive feeling of injustice to themselves. By appealing to class pride I have had an almost perfect attendance for many weeks. A boy played truant one morning; about half-past ten he came in, confessed he had been "on the hook," felt ashamed of having spoiled the class record, and so came in willing to accept his punishment. I have appealed to individual pride, wherever possible, by praising every time I could find the slightest chance. Praising one boy publicly for something that others had failed to do has a good effect upon the boys who fail. They recognize the point quickly, and a rivalry for obtaining this praise is easily aroused. One boy punched another in the eye, because that other had received from me more praise than the puncher thought he deserved. Among these boys the will is exceedingly strong. In most cases it is perverted. The great difficulty is to overcome this perversion. The only way clear to me is to develop feeling instead. Sympathy toward them is an absolute necessity. They are quick as Topsy to notice any aversion. The teacher's reward for effort comes mainly from their ready response to personal kindness. The teaching of book knowledge is a difficult matter. The boys have a strong aversion to work at set tasks. To overcome this, all possible interest must be aroused. Here, also, the material side of life must be used as an argument. I reminded them of good jobs, fine positions, liberal salaries obtained by others because they could do just such work as I was attempting to teach. The response was astonishing. In dealing with these boys the teacher's patience must be inexhaustible. Lack of attention and lack of application are very strong habits in the bad boy. The hope of reward proves a stronger incentive than to

ordinary boys. They are born "grafters," and will work for prizes or pay, when work for work's sake is impossible. Because of the hope of reward and some form of praise I have seen my class, as a whole, steadily working at one set task for a full hour. That alone, in my opinion, was a victory over them; that alone showed the worth of just such special treatment as we are now giving them. It is possible to make these boys worth much, altho the process is long, tedious, and at times very discouraging. They do not retain well anything that is taught them, except possibly arithmetic. This, however, should not prove discouraging, because there is enough victory for the teacher if these boys can be induced to attend regularly, obey willingly, and apply themselves to work. A premium should be placed upon effort, not knowledge. This causes the boy to try. Our work here has been difficult; but all of us feel that the school has met a great neighborhood need, and that it is achieving an immeasurable amount of good.

From all the teachers I have reports on individual progress. Every case is worthy of record. The limitations of a single address make it impossible to do more than quote one typical case.

S., age fourteen, was both a truant and incorrigible. For the first few weeks he persisted in leaving his seat, walking about the room, and talking every minute of the time except when fighting his neighbor. His main purpose seemed to be saucy to his teacher and to let everybody know he had no fear of punishment. He knew absolutely nothing. He could not read and would not attempt to read. He would grow ugly if I made the mistake of asking him to do so. I found out that he liked arithmetic because he knew a little more about such work. I gave him twice as many examples as the others, assuring him that I knew he could do double the work that any other boy could do in the same time. Later I informed him that, if he could read as well as he could cipher, he might stand highest in the class. He waited after school every day for private help. I began with the blackboard and a first reader; later a second reader. In six or seven weeks he had mastered the subject. Today he will read any book he can lay a hand on. I consider this boy one of the best cases of reform in the school. The other day he handed me an old blankbook and said: "Please write in here the things you said about me. My father doesn't think it's true that I am a good boy." Recently he changed his seat to get next to a friend. Foreseeing the result, I said: "S., you may, if you wish to, sit there; but I should like to see you sitting just where I can look at you and where I always know I can find you." A smile came over that face, and the reply was: "I don't care much for myself; it is just as you want me." Within a month this boy will be able to take out his employment certificate, and will carry with him into life respect for every individual in authority. How can I help calling this a case of complete reform?

The following table is a fair, accurate statement of the condition of the special school on February 1:

Total number admitted to date	140
Sent back to regular schools cured	5
Received employment certificates (3 more to go soon)	4
Went to work at sixteenth birthday	6
Mentally not responsible	*12
Mentally lacking (not so pronounced as former)	*6
Arrested and committed by court since admitted to Public School No. 120	6
Arrested and paroled—ditto	7
Chronic truants before attending Public School No. 120	118
Number of these absolutely cured of truancy	100
(Those not yet reformed are mainly pupils lately admitted)	
Number thoroly reformed on all charges	33
(Of these 5 will always need special care)	
Number improving steadily	42

* Soon to be placed in a special class for defectives.

Number improving spasmodically 32
Number improving but very slightly 10
Number showing no improvement at all 20
(This last item includes 6 arrested and committed, and 6 not yet attending a month)

Surely, no further evidence is needed to convince even the most skeptical that a school of this kind would be a benefit to any community. But such schools would not be so imperatively needed, had proper measures always been applied in our regular schools and classes. If the true history of each one of these boys were written, it would be shown that many sins of commission, as well as of omission, on the part of teachers, principals, and superintendents, helped to make these delinquents what they were.

I referred some time ago to the special classes for children over age. This question needs attention. The special class appeals strongly to the backward child, who has often been troublesome because he was not interested in the work of his class. An appeal to his good sense brings about a co-operation with the teacher in her efforts to carry him thru two or more grades of school work in one term. I have on hand many records which read as follows:

L. V., age twelve, went from 1B to 4A in five months. Extreme discipline problem before being put into special class; now an earnest worker.

L. R., age fifteen, from 2A to 4B in five months. Bad boy before being placed in special class; now good and industrious.

J. S., age thirteen, from 3A through 5A in seven months. Had been very troublesome; now obedient and industrious.

H. S., age twelve, 3A to 5A in seven months. Very disorderly before being placed in special class; thoroly reformed.

The foregoing were all boys.

L. S., a girl, age twelve, from 1B to 3B in five months. Previously known as a bad girl.

S. K., age eleven, 1B to 3B in two months. Previously known as a bad girl.

R. F., age twelve, from 2B to 4A in seven months. Troublesome and difficult to handle before being placed in special class; now gives no trouble.

And so the records run.

Is there anything that can be done for the incorrigible child, where conditions are not favorable for organized reform along the lines of special classes or special schools? Have you ever seen a number of children playing the game called "Follow Master"? The leader is chosen, or chooses himself, and the laws of the game require all that follow him to imitate exactly whatever he does or says. No matter how absurd, no matter how ridiculous, no matter how foolish, no matter how dangerous his movements may be, the game demands from all the others blind, unthinking imitation. We, at the top of our profession, are leading our principals and teachers in a great game of "follow master." Are we possibly leading our followers to do what is absurd, or ridiculous, or foolish, or even dangerous? There is something pathetic in the way principals and teachers try to do those things which they believe the superintendent desires them to do. Are we superintendents always leading wisely in this great game? Is it not possible that while we have been

leading toward penmanship of a certain character and style; reading according to this, that, or the other method; brilliant, immediate results in arithmetic or technical grammar; marvels in the production of juvenile compositions; wonderful exhibits of manual and constructive work; high averages for promotion or graduation; or the other details which to us seem pedagogically important, we may have forgotten to lead along those lines which would have helped the incorrigible child and prevented some others from joining the ranks of the incorrigible? Do you not feel, in this blessed privilege of leadership that has been given to us, that if we had made it clear to those who follow that character means more than knowledge; that effort in the right direction means more than tabulated results; that the rescue of the soul of one child is a greater achievement for any teacher than the promotion or graduation of 90 per cent. of his class, possibly more might have been done for the incorrigible child? Is it not time that all superintendents should declare: "It is not what your children do, but what they are, that is the measure of your success; it is not the number of questions your children can successfully answer, but it is the number of temptations that they can successfully resist, that proves you to have been a successful or an unsuccessful teacher"?

Our poor teachers! They work so hard; they work so incessantly; and the pity of it is that so much of their energy is misdirected. Why? Chiefly because from time immemorial we have placed the shadow above the substance. We have prided ourselves on what has been done for the child who survives. We have never recorded what has become of the child who fell by the way. Is it not time that a higher standard be imposed? Does not this country need character more than it needs knowledge of facts? Understand, I know full well that all good teachers and good principals constantly hold before the children standards of right living and of true worth; and that many a child is benefited thereby; but this has not prevented thousands of children from going thru school and out into life with a lack of character that is a reflection upon any school system, and that tends to lower the standards of citizenship thruout our land. We are expected, in communities largely made up of foreigners, to give correct American standards of living to the children of the alien. Are the standards of living in American communities wholly creditable? Would the general corruption in municipal government, would the general unethical basis of the commercial world, be possible, if correct ethical standards had been given to the men who control the affairs of the world today, at the time we had them as little boys in school? But, as Kipling says, "that is another story;" so let us get back to the incorrigible child.

There are home conditions of poverty and of degradation, or of indulgence and bad judgment, which send even the little child to us, morally, if not intellectually handicapped. It is the sacred obligation of the teacher in whose class this child is first placed to find out something of his home conditions,

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thru our utterances to the attention of the living, acting community? If on the other hand, we feel that our official duty is discharged by the occasiona commitment of an incorrigible child, instead of tracing incorrigibility to it causes, and trying to remove those causes, do we not show ourselves unfi for the responsibility of leadership? It is too late to solve discipline prob lems when the extreme case is brought to official notice. We must begi lower down, and we must begin at once. For a time the present troubl must last, because lawlessness has been so steadily on the increase amon our boys that remedial measures will be required for some time; but thi same lawlessness will increase at an appalling rate unless we capture th little ones now and remove from their lives those influences which have mad the bad boy of today what he is. Boys already so defiant of all authority so willful and disrespectful, as was the material out of which my specia school was constructed, must be removed and placed in small classes unde specially chosen teachers.

But that is not enough. Permanent preventive work can come onl from taking measures to change the standards of discipline in the entir teaching body. We must watch closely every teacher in whose class truanc and other violations of the law are most frequent; and if lack of sympathy lack of tact, or bad temper on the part of the individual teacher is found t be responsible, in whole or in part, for these troubles, we must have the courag to prefer charges against such a teacher, and remove him or her before furthe damage results. Drastic measures in removing two or three of the wors offenders would insure an improvement on the part of others who by thei harshness, injustice, and unkindness are helping to embitter the school lif of many a child. Emmy Lou's "Ogress" must disappear from our schools Emmy Lou's "Dear Teacher" is needed in every room. We hear ver little about the incorrigible child from "Dear Teacher." If, however, th fault does not lie with the teacher, there must be something inherently wron in the troublesome child, or something in his environment that tends to mili tate against the best influences of the school. Some plan must be devise to make special provision for the proper training of such children. Childre who cannot, or will not, obey the laws of a school, as administered by a sane tactful, sympathetic teacher, must be treated as diseased, and must be iso lated for their own good and for the protection of others. We dare not wai until the child infected has advanced in years, with ever-increasing disrespec for authority. The disease must be treated in its incipiency. Physician have proved beyond question that a cure is possible in every case of incipien tuberculosis, if properly treated. Beyond the incipient stage recovery i less frequent, and the danger of infection to others immeasurably greate So, too, with our discipline problems. In the incipient stage, under prope treatment, all, or practically all, can be cured. Once allow a child to ge well beyond the incipient stage of lawlessness, and recovery is not only doubt ful, but the spread of the disease is a natural sequence.

It has taken years to educate the public to a proper conception of the duty of every individual toward checking the spread of the white plague. It must now become our duty to educate teachers, parents, and public opinion generally to the fact that defiance to authority presents a greater menace to our country than does tuberculosis. The spread of moral disease is infinitely more far-reaching in its influence for evil than the spread of physical disease. If, then, it be essential for the public to help physicians stamp out incipient tuberculosis, how much more necessary is it that the same public should be appealed to, to help teachers stamp out incipient lawlessness? Let me continue the comparison. What would be thought in medical circles of physicians and nurses, charged with the care of tuberculous patients, who recklessly scatter the germs of disease instead of carefully destroying the same? What, then, must be thought of the teacher or principal whose prime function is to train the child of today for future citizenship, if he recklessly scatters the germs of incipient lawlessness so that the spread of the evil is bound to follow? Such germs must be exterminated; proper preventive measures must be applied to the control of the contagion. The teacher, under the influence of nervous excitement and irritability, due to conflict with the troublesome child, is recklessly scattering these germs, so that others in her class not yet contaminated are in the greatest danger. Tact, courage, sympathy, and infinite patience on the part of the teacher are the only remedies for incipient lawlessness. Teachers must learn that, if the strong will of a child is set up in opposition to the teacher's mandate, insistence upon immediate surrender to the teacher's will is bound to carry with it humiliating consequences. It is far better to ignore such an outbreak, to take no notice of the child at that particular moment, and to wait for the right opportunity in which to gain the disputed point. This point is rarely gained by forcing the issue at the moment that the child is controlled by stubbornness, and the teacher by temper. Many a boy has grown hard and ugly as a result of battles of this kind, when at the moment of rebellion the display of sympathy, tact, and judgment on the teacher's part would have resulted in future control, not only of the teacher over the child, but possibly of the child over himself.

Here, then, is one line of thought for the teacher who is tormented by an unruly boy. Possess your soul in patience and await your opportunity. How can you expect to teach a willful child self-control, when you cannot control your own mood under provocation? A contest with an angry child, or with a sullen child, is bound to spread the germs of disease. Treat the case scientifically, and remember that even germs cannot always be destroyed on the spot. One must carefully gather them together, and carry them, as opportunity offers, to those places where their destruction is assured. If only we could learn to treat lawlessness as we treat tuberculosis!

Our poor teachers! The whole world sympathizes with their struggles. Paradoxical tho it may seem, I reserve the term "poor teacher" for only the

good teacher. The really poor teacher does not deserve much sympathy. If the recording angel is doing his duty, there will be a long account for the poor teacher to settle, some day; and when that day comes, may God help her! Fifty years hence what difference will it make if the present official school record of any teacher be good or poor? But think of the difference if the record in the Great Beyond be a poor one! Some day each of us will stand before the Great Judge. How shall we then answer such questions as these: "What did you do with all those little children intrusted to your guidance? How many young, erring souls did you save from destruction?" These are serious thoughts; but does not the very sacredness of our work make it necessary for us to think seriously? Is there not something more to teaching than the mere assigning of tasks, the hearing of lessons, the making of records, the promoting of children, and the doing of the thousand and one things that now seem of such great importance? Is there not something higher to be aimed for? Cannot teachers be led to feel that the final aim in teaching is the directing and organizing of the entire educational process, so that every child shall find self-realization in a happy and useful manhood or womanhood? Is a happy and useful manhood or womanhood possible for the incorrigible child? Yes, but on one condition only: all traces of incorrigibility must be removed from his character before the influence of the school is taken out of his life. This can be done; this must be done. "If it were well done when 'tis done, then 'twere well it were done quickly."

We who are in the official position to change or dictate school policies, to shape school legislation, to guide and direct teachers, must assume our share of the responsibility, and assume it quickly. It is we who must see that every child gets tasks according to his age and needs. It is we who must see that special schools or special classes, under most carefully chosen teachers, are provided for all children who are defiant toward authority. It is we who must train teachers to give to all cases of incipient lawlessness the scientific treatment accorded to physical disease. It is we who must, if necessary, remove, or cause to have removed, all teachers who, because of temperamental defects, by their impatience and unreasonableness, are driving children into truancy and defiance. It is we who must lead all teachers to see that the development of proper character in the child transcends all else in importance, and that a teacher's highest duty lies in saving the soul of the child who otherwise might fall by the way.

There must be a change in the special attitude of the teacher toward misdemeanors and misdemeanants. On the teacher's part there must be the yearning and eager activity to save and redeem. This activity is bound to react upon the child until it is fair to expect him to repent, or to cause him to feel the need of repentance. The child who repents can easily be saved. The proper attitude toward the misdemeanant demands that the teacher consider his obligation as a labor of pity and love. Instead of threats and condemnation, the teacher must give the chance for hope, admiration, and

love to work their wonders. Even in a hardened sinner a part of the soul often remains untainted. Think, then, what evil must result when a teacher refuses to look for and nourish the untainted part of the soul of a child. No labor of love and pity is ever wasted.

> "Talk not of wasted affection, affection never was wasted;
> If it enrich not the heart of another, its waters, returning
> Back to their springs, like the rain, shall fill them full of refreshment."

It is this refreshment that will be the salvation of the teacher and of the incorrigible child. Affection and not condemnation must be the teacher's attitude. No child is so hardened that it will not respond to so gentle an emotion; no child's life so spoiled that the untainted part is beyond redemption; no child's habits so formed that a change in aim and achievement cannot be brought about. Teach every child that success cannot come to all; but that, if he cannot reach success, he may still win life's first prize—character. Some day, perhaps, every teacher may learn that his or her truest mission lies in giving to the child inspiration and stimulus for right living and for the formation of true character; some day, perhaps, every child may learn that no success, that no achievement, can be compared in worth to true character. When *that* day comes, there will be few or no discipline problems; when that *day* comes, pessimism will give way to optimism; when that day *comes*, the teacher's heaviest burden will disappear; *when* that day comes, there will be no incorrigible child.

THE EXAMINATION OF THE EYES OF SCHOOL CHILDREN

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The development of the mental faculties depends largely, if not entirely, upon the functions of perception, and these should therefore receive critical attention during childhood. Professor Tait, of the University of Edinburgh, Scotland, in his treatise on light says: "All our other senses together, except under very special conditions, do not give us one tithe of the information obtained at a single glance, and sight is also that one of our senses which we are able most effectively and extensively to assist by proper apparatus.

The phonograph, reproducing the falsely pitched voice and nerve-racking discords of a distempered piano, graphically demonstrates the undulatory theory of sound; nor can we criticise the faithful reproductions of these sound photographs.

Sight is purely a mental phenomenon, for the image of external objects reflected upon the inner wall of the eye is transmitted over the million nerve fibers composing this wall to the innermost recesses of the brain, where consciousness of vision is born and where also, phonograph-like, mental impressions are recorded, which, even after the lapse of years, will enable the mind's eye to pass in review that which caused them.

In the phonograph we know the accuracy of construction and delicacy of

adjustment essential to its satisfactory operation. We should certainly be equally critical in dealing with that choicest of possessions—the eye.

Environment largely influences the mind for good or evil. The deformed eye therefore, which constantly transmits to the brain distorted images, must undoubtedly have a demoralizing influence upon the mentality. That this is true is evidenced by the statistics of our reformatories, homes for the feeble, minded, inebriate retreats, and insane asylums, showing, as they invariably do large percentages of visual defects in the inmates.

Allen Greenwood, M.D., in an address before the Boston Medical Society, recently urged that municipalities take up the investigation of the eyes of school children, emphasizing the fact that alarmingly large percentages of backward and feeble-minded children examined had been found to be afflicted with deformities of the eyes impairing vision, all of whom evidenced marked improvement mentally and physically when defects of sight had been corrected.

The *Medical Review of Reviews* quotes the results of investigations conducted by Dr. Theodor Gelpe, of Vienna, in which he states that 72 per cent. of feeble-minded children examined had been found possessed of extremely defective eyes, largely of a congenital character, capable of marked improvement by properly adapted glasses.

Dr. John J. Cronin, chief of division of school inspectors of New York City, reports that out of 7,166 pupils examined 33 per cent. were found to have defective sight; whereas in Philadelphia the health board recently recommended that the authorities provide funds for supplying suitable examinations and glasses to the large numbers of poor school children in need of them.

One of the frequently encountered defects is a marked deformity or subdevelopment of one eye, which, owing to the resultant low vision and consequent non-use, leads either to its total loss, a condition of cross-eye, or the various phases of nerve-suffering and mental degeneration herein referred to.

During childhood, when development is as yet incomplete, nature sends to each function blood and nerve supply, not only for the purpose of enabling it to perform its work, but also to contribute to its growth. If, therefore, owing to a deformity or faulty development, an excessive activity is involved, a correspondingly excessive expenditure of nutrition and energy will result, depleting the part and interfering with its development.

The question presenting itself is, therefore: Can an effective and feasible means be provided by which these cases can be discovered? It has been found impracticable to accomplish this by means of specialists, as the task, owing to the large numbers involved, is a difficult, if not an impossible, one. Several years ago the speaker suggested a plan which, if carried into effect, would result in the discovery of at least many such afflicted pupils.

For this purpose the regular wall test-chart is used. As many pupils as possible are seated in two rows facing the wall, and about twenty feet away. The rest of the pupils leave the room. Each of these pupils is provided with a sheet of paper on which to write his name.

The pupils are now requested to cover one eye with a handkerchief (or strips of muslin can be used), the teacher displays the test-chart on the wall, and the pupils are instructed to copy the test-letters thereon, holding up their hands when completed. Some will accomplish this task quickly, while others will hesitate, and after considerable effort abandon the attempt. (The teacher can here obtain considerable information of their acuteness of vision.) When sufficient time has been allowed, the chart is removed, and the pupils are required to cover the other eye, when the reverse side of the chart, containing other letters, is displayed and copied in a similar manner. These papers will at once indicate the acuteness and accuracy of vision of each eye, those showing unsatisfactory results being later again submitted to the test.

Where one or the other eye is very deficient, the result will at once indicate it, and parents can be notified. The principal should always have this chart at hand for the purpose of investigating the eyes of the dull, non-studious, unruly, or truant scholar, which may frequently furnish evidence of inestimable value.

Experience has demonstrated that marked deformities of the eye are frequently due to malformations of the skull, which the analytical observer readily learns to recognize, whereas those pupils having deeply wrinkled foreheads, or those complaining of periodical headaches, should always be suspected as being possessed of eye-defects, and be subjected to examination.

The following cases are typical and demonstrate possibilities: Two years ago a boy thirteen years of age was brought to me. His vision was stated to be satisfactory, but nerve disturbances, which had evidenced themselves since his first school year, had gradually become more marked, until they had developed into a well-defined condition of epilepsy, the boy having had several attacks of falling fits monthly. He had been under treatment for four years, without relief, whereas recently attacks had become more severe and frequent. Examination revealed an extreme distortion of the left eyeball, with vision in this eye very imperfect and accomplished at the cost of great strain, leading to acute headaches if the eyes were used for any length of time. The correction of the defect by the requisite glass, and the enforced activity of the defective eye, gradually not only brought vision in this eye up to the normal, but has contributed to such an extent to improved physical conditions that for the past eighteen months he has attended school regularly, which he had not been able to do for several years prior to this time, and nerve disturbances have entirely disappeared, the boy not having had an attack in over a year, whereas his school percentages show a marked advance.

The second case was that of a boy of twelve brought me by one of our principals. He was the son of extremely poor parents, who ridiculed the idea of glasses. He was given to truancy, was difficult to control, was non-studious, and apparently was mentally deficient. The correction of an extreme anatomical deformity of both eyeballs by suitable glasses not only developed vision where he had been to all intents blind, so far as objects beyond ten feet

were concerned, but his vicious tendencies disappeared, and he became fond of his studies as evidenced by the marked change in his percentages. He is now working after school hours, and his employers commend him and are interested in him, and I am firmly convinced that the boy's future has been largely influenced for good.

The third case was that of a young girl, age sixteen, who since her eighth year had suffered from periodical attacks of headache, which in recent years had been accompanied by digestive disturbances, evidencing themselves by acute nausea, which had defied medical treatment. An examination revealed the fact that, while the left eye was normal, the right was so defective in formation that well-defined vision was an impossibility. Upon being questioned, she insisted that her vision was perfect, she being able to see test-letters either on the wall chart or at reading distance. Upon being requested to hold her hand over the left eye, she for the first time realized that she had no vision in the right beyond the ability to perceive light. With the proper glass before this eye she could with difficulty vaguely discern letters one-half inch in size when brought to within six inches of the eye, and these for only a minute, when they became blurred and then faded away. Why? Because, owing to the existing deformity and consequent non-use, the visual functions in this eye had not developed. Spectacles containing an opaque glass before the normal eye, and the corrective lens before the deformed eye, were prescribed for exercise use. By this means the dormant eye was forced into activity for short periods at first, as exhaustion speedily evidenced itself. After the first week improvement was marked, and the eye could now read headlines in a paper for ten minutes. At the end of the second month the eye was able to read regular newspaper print for half an hour. At this time clear glass was placed before the good eye, and glasses have since been worn constantly. Recent examinations reveal vision to be normal in the deformed eye thru the corrective lens, but, what is most significant, headaches, and nerve and stomach disturbances, have disappeared, and the general health is vastly improved.

This case would undoubtedly have been discovered by the test suggested, because the girl could not see even the largest letters on the test-chart with the defective eye, whereas a study of facial proportions at once revealed a marked distortion of the right side of the face, due to a cranial deformity.

The query constantly propounded by the public is: "What has caused conditions necessitating the extensive use of glasses by the young?" Statistics dating back to the early part of the last century show that in the university centers of the Old World the percentage of defective sight among students was very large, and scientists now generally concede that, at least so far as that condition known as myopia or near-sightedness is concerned, deficient light, and the consequent tendency on the part of the pupil to approach abnormally close to his books, is, in a manner, responsible; whereas many maintain that, in view of the fact that the human eye in early childhood is mark-

edly subnormal in development, whereas the demands upon it are constantly increasing, every effort should be made to assist it by proper apparatus during this period, wherever such are found acceptable. But, what of the conditions here so briefly described? Anatomists are agreed that the violation of nature's laws, attending the demands of modern fashion, has to such an extent modified certain portions of the female anatomy as to make motherhood extremely difficult, necessitating in a constantly increasing percentage of cases the aid of mechanical adjuncts, to the use of which the cranial deformities referred to can, in a large measure, be traced.

Can we contemplate these possibilities unmoved? How many children may be struggling on under your very eyes, condemned to live within a circumscribed mental as well as visual horizon, to whom science might give invaluable service were she but appealed to?

Cultivate the ability to read aright the hieroglyphics graven by suffering upon the faces of the young. Note the faulty position assumed by some students, the extreme tilting to one side of the head, a disposition to squint until the eye is scarcely visible. Add to this the simple visual test suggested, and you will encounter, where you least suspect them, visual deficiencies, the correction of which will not only be of great value to the ones afflicted, but will prove a fascinating and grateful field of research, and lead to the discovery of new truths.

WHAT SHOULD BE THE BASIS FOR THE PROMOTION OF TEACHERS AND THE INCREASE OF TEACHERS' SALARIES?

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By "promotion of teachers" I understand advance to positions of greater responsibility or authority, as, for example, head of department, first assistant, vice-principal—positions in which a higher order of executive ability is required than is essential in work limited to a single class-room. The kind of executive ability required in a given position must be discovered chiefly by observing the individual's way of doing things, his judgment displayed in meeting difficult situations, and his skill and tact in preventing difficulties from arising. An examination serves this purpose but little, except in so far as it widens the area of choice of candidates by inviting competition from beyond the home locality. An examination may, however, serve to disclose weaknesses that were not even suspected; and, when this is the case, its negative value is very great.

In the twenty minutes allotted to me I prefer to consider the second part of the topic, "the basis for increase of teachers' salaries," as I believe this to be the more vital of the two phases of the subject at the present time.

Salary should not depend upon grade taught.

I do not here refer to extra compensation given in certain grades for

teaching special subjects, as Latin or a modern language; nor to the higher salary which in some places is given to male assistants, teachers of ungraded classes, or such special positions; but to regular salary schedules. To make increase in salary depend upon assignment to a higher grade is to cause teachers to regard their present work as temporary and of relatively small importance, and to divert their attention from the finer problems of the work with the group of children immediately in their charge. This policy in school management tends to lessen the efficiency of service in the grades from which transfer is sought. For the sake of the children for whom the schools exist, therefore, teachers should be able to secure advance of salary *in* present work, not exclusively *away* from it; at least they should not be forced by considerations of salary to bend their efforts toward getting away from present work. Taste and aptitude should govern in such adjustments. To place a higher money value on teaching in the upper grades would imply that these grades require more of the teacher in education, training, skill, and effort than is required for thoroly good work in lower and intermediate grades. Really good work anywhere costs effort. Poor work is no more to be tolerated in the intermediate grades than in those above. If the authorities fix a higher salary for upper-grade work, teachers not well adapted to it will seek it solely on account of the financial inducement offered. It is to be expected that they will magnify the value of the work that carries the higher salary, and to a proportionate extent belittle the value of service in lower grades.

Teachers whose powers and aptitudes point to seventh- and eighth-grade assignment as most appropriate are not, as a rule, found averse to taking such assignments even where no salary inducement exists; furthermore, when a mistake is made in assigning a teacher, it is much easier to correct that mistake when such correction involves no loss of salary. From various points of view, therefore, it seems to me unnecessary and unwise to offer financial inducement to teachers to take upper-grade work. It may immediately be asked, then: Why pay high-school teachers more than elementary-school teachers? We demand of all who teach in elementary schools the academic attainments evidenced by the high-school diploma; from those who are to teach in our high schools, the attainments evidenced by the college diploma or its equivalent. At the point where we establish the higher educational requirement we may admit the force of the argument for a different schedule of salaries based on the added cost of collegiate education.

Even tho we grant that a teacher *can* do business after a fashion in the lower grades on a smaller capital of knowledge than would be required to avert failure in the upper grades of the elementary school, we find that our recognized national standards do not set up a lower educational demand for lower-grade work. For the elementary-school teacher, both in primary and grammar grades, the recognized standard on the academic side is high-school graduation. We do not willingly accept less even from those who are to teach in our kindergartens.

When advance in salary comes from good work in any grade, teachers seek assignment to the grade for which they are best fitted by disposition and attainments, whether that grade be high or low; not so when increase in salary depends upon transfer to a higher grade. For the sake of teachers and children, the superintendent should have the greatest possible freedom in fixing and changing grade assignment. This can be had only by eliminating *grade taught* as a factor in salary advance. The same principle should hold also in the high schools: highest salaries should not be given exclusively to teachers conducting the most advanced work; first-year pupils should share with advanced pupils the best instruction that the school affords.

Salary advance beyond a certain point should not be based on years of service.

For a time, the period differing in individual cases, there comes increased efficiency with increased experience. This is likely, however, after the first few years to be limited to ease of control, with small increase in teaching skill. There is a tendency—a very strong one, too—to fall into a lifeless routine; to lose the early interest in the work itself; to perform the daily duties as a task rather than as a vitally interesting piece of the world's work. Tho this tendency may not appear in the "born teacher," yet the great army of teachers, like the great army of people earning their daily bread in other occupations, begin their work without any heaven-sent call. They must be trained. In these days, when salary advance is in the air, we owe it to our calling—which we hope, if not now, then at an early day, to call a profession—we owe it to our profession to see to it that, in the words of the Committee on Taxation of our Association, "we can point to a dollar of value in service for every dollar added to the tax budget;" or, as I prefer to say, we can point to the best possible teaching that the money of the taxpayers will secure.

This has seemed to me to be the consideration that would guide the owner of a large private business in employing the members of his force and in fixing their salaries. To test this, I addressed ten letters of inquiry to as many representative men in my city, each interested in the management of a business involving large capital, and employing many subordinates. The questions were as follows:

1. Do you pay level salaries in a given department?
2. To what extent, if any, do years of service count in fixing salaries or in making promotions?
3. To what extent ability shown or quality of service rendered?
4. What provision is made for the aged employee the value of whose service is diminishing year by year?

One writes:

1. We do not pay level salaries in any department, altho we are paying skilled labor a minimum rate fixed by labor unions, as we employ all union labor. (The more capable workmen receive more than the minimum rate.)
2. Years of service do not count in fixing salaries or making promotions.

3. Ability and quality of service only are recognized in fixing salaries.

4. To the extent of our ability, we find sinecure positions for aged employees who have been in our service for a number of years, but, as we have an average of a couple of thousand employees, we cannot make an arbitrary application of this rule.

Another writes:

In response to your favor, I think the question of merit prevails almost universally in all commercial houses, promotion of employees being dependent upon their usefulness and ability, and it is frequently the case that employees are promoted above those who have been very much longer in service.

We do not pay level salaries in a given department, but there are some positions that would naturally carry a maximum salary, and the maximum salary is obtained and retained by those showing efficiency, while inefficient persons do not retain those positions for any long period.

From our experience, it is the exception and not the rule to pension employees who have been long in service, but in special cases this is done.

In closing one makes this remark:

Permit me to say that I fully agree with your idea that the same considerations should obtain in the management of public business and public money as in private, and I hope the time will come when Baltimore will be managed as economically and efficiently as are the cities of Great Britain and Germany, and especially that our schools may be conducted on broad lines solely for the greatest good to our children.

These letters are typical of all. No employer pays level salaries. No employer makes salary dependent chiefly on years of service. All make the chief consideration ability shown and quality of service rendered.

Why do not such considerations prevail more generally in public-school work? Are public funds to be used with less regard to returns than private funds? The business man does not hesitate to estimate the value of service and arrange his salary schedule accordingly. He has standards of efficiency, and he applies them. We may differ as to the particular merit plan we adopt; but as professional men and women it seems to me that we cannot stand for level salaries regardless of the value of the service rendered, so long as it ranks above failure. I believe, further, that the merit system is full of encouragement to those who expect to become teachers. Under such a system trained and efficient teachers are not put at a disadvantage in competition with those poorly prepared for their work.

In speaking of the considerations that should govern in salary increase, I quote with full approval a paragraph from the last report of the superintendent of schools of Chicago.

If the welfare of the children in the schools is the fundamental consideration, we must be governed in fixing teachers' salaries by an estimate of the value of the services rendered by the teacher. Any consideration is invalid, except in so far as it affects efficiency. Any increase of salary based upon length of service can be defended only in so far as it can be shown that length of service conduces to greater efficiency in the work of the schoolroom. Difference of salary based upon sex can be defended only by showing that sex is a factor that must be considered in estimating the efficiency of the teacher. Increase of salary based upon zeal, student-like habits, and scholarship must alike be tested by this criterion of efficiency.

By way of illustrating the application of these principles to actual practice, I may be permitted to tell of what we are now doing in Baltimore. On the first of January, 1906, rules went into operation in our city that will in the near future raise the salary level in the elementary schools 40 per cent. The immediate increase amounts to fully 20 per cent. These rules represent the outgrowth and completion of a promotion plan inaugurated on a small scale three years ago. The operation of the plan requires an estimate of each teacher's efficiency in the terms "excellent," "good," "fair," or "poor." The estimate is made by the principal, but is subject to correction by the superintendent, and the superintendent undertakes personally to investigate doubtful cases. Appointment to the service is for one year on trial after one year or more spent in substitute work. Prior to this the candidate must have completed a high-school course and have spent two years at our teachers' training school. During the trial year the young teacher is supervised by the training-school teacher known as the director of practice.

The trial year over, advance in salary is automatic for three years, when to secure further increase the record of efficiency must be at or above the point denominated "good." This record having been secured, an advance in salary of $200 in installments averaging $40 a year may be secured by passing a promotional examination which includes the record mentioned above.

The examination is in two parts. The first part may be taken during the third year of service, and the second part two years later. In our book of rules the promotional examination is thus defined:

> The Promotional Examination, Part I, shall consist of: (*a*) the teacher's efficiency record, which must not be lower than "good," as determined by inspection of regular class work by the respective principals and the superintendent; together with (*b*) an impersonal test of the correct and effective use and interpretation of English.
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> The Promotional Examination, Part II, shall consist of: (*a*) a written report of the working-out of some problem of teaching, or of the study of a particular group of children; (*b*) such a defense of the report as will evince familiarity with educational literature bearing on the problem or study; and when required (*c*) a class-room demonstration.

These tests are not necessarily difficult, but they will readily lend themselves to gradually advancing standards. Take the test in English, for instance: mere correctness may go along with woodenness or emptiness; for this reason the word "effective" is added. The writer must have something to say, and then say it in such a way as to make a definite impression. Furthermore, to interpret to a child is one thing, to an adult another thing. Effective interpretation must regard the audience as well as the piece of literature to be interpreted. We select English for this examination because it is the universal subject. It occupies approximately one-third of each day on our school programs in one form or another, besides being the vehicle of instruction in all other subjects. If, then, any one study should engage the attention of a young teacher on her way up to the first regular salary level, that study is English. It is a good thing for the teacher during her

first three years of service to be preparing to meet the English test—a good thing for the teacher, and a good thing for the children she teaches. Study carried on with a view to such an examination in English will be directed along lines helpful to the schools. This is our purpose—to strengthen the language side of our work.

As to Part II of the promotional examination, a teacher may take it after the fifth year of service, if she has been promoted under the rules governing Part I. By this time she should have developed some independence and considerable professional skill. The test imposed for eligibility to the maximum salary is one in the power to discover problems in the daily class work. It is a test in thoughtfulness—not in memory. It is a highly professional test. Its tendency cannot fail to be toward greater sympathy with children, closer observation of their individual characteristics, their home environment, and the many things which the true teacher needs to take into consideration, if she would reach a high level of efficiency.

It may be objected that the so-called cultural studies are too little in evidence in this examination. This will hardly be charged of Part I, the test in English. As to Part II (the discovery of a problem and the preparation of a report upon it), such a defense of the report is required as will evince familiarity with the educational literature bearing on the problem studied. To some extent, surely, this is cultural; if not sufficiently so, we can easily improve it in this respect when we are able to add another $100 to the annual salary, not now very high. The two tests have the merit of being progressive. The second is in no particular a repetition of the first, either in substance or method of management. An examination conducted on the plan of the thesis and its defense attains a dignity that the ordinary examination lacks, and it affords the examiners an opportunity to know more fully the professional equipment of a teacher than it would be possible to learn by the observation of schoolroom work alone or by the ordinary written examination. Each teacher who submits a report must be able to explain it fully, and defend it by reference to recognized authorities and to actual conditions in her own schoolroom. In order to do this well, it is necessary to make thoro preparation. To one well prepared the ordeal seems easy enough, and so it should be; but to one who so underestimates its searching character as to slight in any way the preliminary work, or to adopt any fine-sounding pedagogical phrases not clearly understood, the examination seems, as it should, severe indeed. Both parts of the examination—Part I and Part II—have the merit of directing the attention of the teacher to the regular daily work, and to the children she is to teach.

In order to retain the maximum salary, a teacher must continue to render acceptable service; the advance is not, therefore, to be regarded as necessarily permanent.

Altho it does not come exactly under the topic of this paper, I venture to mention another problem taken up by the Baltimore board—it is the problem

of the teacher who has served the city many years, but who, thru advancing age or other causes, is no longer efficient. A school system as extensive as ours requires a large number of substitute teachers to take temporarily the classes of regular teachers who are visiting other schools or are absent on account of illness. It is the opinion of the board that teachers no longer fully efficient, but who have given their best days to the schools at a salary out of which they have been able to lay up little or nothing, may, with entire justice to the taxpayers, be allowed to do as much of this occasional substitute work as they are able to do, and such clerical work as all large schools afford. For three years a rule has been in existence which allows such teachers, upon their application, to be placed upon a list of special substitutes at a salary of $360 per year. Our city has as yet no fund for pensioning teachers. The state pension is only $200 per year. Our special substitute list is, therefore, a welcome half-way station for worthy teachers who can no longer do full work.

It is not difficult to establish new rules for new teachers; but when the new rules operate to stop the unconditional advance of the less meritorious teachers of the regular force along the new salary schedule, a situation arises that must be met with firmness, and yet with kindness and consideration.

The care now exercised in training our teachers, the freedom from interference which we enjoy in sifting out the unpromising, and the encouragement offered to teachers while in service to become highly efficient, should in future enable us to eliminate to a great extent the problem of the inefficient teacher.

THE NEXT STEP IN THE SALARY CAMPAIGN

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The discussion of this topic as a question of national scope is rendered somewhat difficult by the fact that teachers are selected and their salaries determined by local authorities, limited only by state regulations regarding revenue and teachers' qualifications. In some communities in every state an intelligent and insistent public opinion demands that salaries be high enough to secure and retain teachers of personal worth and adequate training. In some states where the educational forces have been so fortunate as to secure wise and capable leadership, ample revenue, a high standard of qualifications, and a living salary have been secured by legislation. The splendid advance in the neighboring state of Indiana made during the last four years, under the leadership of your president is a case in point.

Hence any detailed discussion of this topic must deal with the conditions in particular states; the conclusions reached may be of interest so far as like conditions are found elsewhere. I offer this apology for my frequent reference to conditions in Illinois. A further justification may be found in the fact that the Illinois school system is almost completely decentralized, permissive

rather than mandatory in its legislative provisions; hence, in spite of the effective work done in Chicago and a few other communities, it stands well to the rear in organized effort to better the salary situation thruout the entire state.

The statement of the question by your president assumes that at least one substantial step has already been taken. He, doubtless, has in mind the exhaustive investigation of teachers' salaries made during the past two years by a committee of the National Educational Association, under the chairmanship of Carroll D. Wright. The report of this committee, along with the authoritative data collected under state auspices, makes clear that, while in many of our larger cities teachers are fairly well paid, yet in the majority of our smaller cities and villages, and almost everywhere in rural districts, the scale of wages is entirely too low to maintain the schools even at their present level of efficiency.

It is not necessary to marshal statistics to demonstrate this proposition. It is proved by the prevailing scarcity of teachers. I assume that this scarcity is a matter of common knowledge. It is certainly known to superintendents charged with the selection of teachers. In more than one county in every state in the Middle West schoolhouses are standing empty because a suitable teacher cannot be found. County superintendents and boards of examiners have been obliged to lower their standard of requirements for admission to the profession, to reject fewer applications for certificates. One county superintendent reports that last year he rejected only two, while two years before he turned away forty-three. Under such conditions the children must suffer. The schools must be supplied with teachers. All who can pass muster with the county superintendent are reasonably sure of employment, while he in turn must level his requirements to the ability of the available candidates.

An examination of the roll in any particular county will show that many of the best teachers are leaving the work; the men to farm, to study law or medicine, to become insurance agents and traveling salesmen, or to enter the government service; the women to marry, to become trained nurses, stenographers, responsible bookkeepers, and saleswomen. There has always been this outflow from the profession; but just now it is greater than before; fewer young people are ready to fill the vacant places; and I think we must all agree that, in view of the needs and responsibilities of modern education, too few are looking seriously to a career in this profession and making adequate preparation for it.

Why are teachers scarce? The economic law is that labor drifts from one occupation to another according to the relative inducements offered in each. At all times teachers have been drawn to their vocation by a variety of considerations. The social position and public respect accorded to worthy teachers are no mean inducement. People who love knowledge for its own sake, not merely for the uses to which it may be put, usually find delight in sharing their treasures with others. Many, too, are attracted to the schoolroom by a genuine love of children. To most of us, I take it, teaching is more than an occupation;

lectures, and concerts. A vacation outing is no extravagance if it buys vigor and inspiration for the schoolroom. The teacher's salary should be sufficient to reimburse him for his outlay for professional training, to maintain his professional growth, to enable him to live in the part of the town and dress in the style which the community demands, to bring up and educate his family, and lay by something for old age.

In the Indiana Report on Taxation and Teachers' Salaries the following recommendations are made:

For the rural schools, $400 to $600 per year.
For grade teachers in towns and villages, $480 to $650.
For grade teachers in cities of 25,000 inhabitants, $600 to $800.
For grade teachers in cities like Indianapolis, $750 to $1,000.
For principals of elementary schools in smaller cities, $900 to $1,000.
For such principals in larger cities, $1,200 to $1,800.
For high-school teachers, the same salaries as for ward principals.
For high-school principals salaries should be about 50 per cent. greater.

County superintendents should be put on a par with other county officers. City superintendents should be paid as well as the postmasters of the same cities. In Chicago and a few of its suburbs the superintendent of schools is better paid than that official. In the 220 Illinois cities paying their school superintendent $1,000 or more the postmaster's salary averages one-third larger. His responsibilities are surely no greater; the required standard of character, ability, knowledge, and culture, no higher.

Three remedies are proposed for the existing salary situation. The first is a sort of *laisser-faire* policy that would rely upon the methods that have hitherto bettered conditions in our progressive communities. It would say to teachers, in the words of Newton Bateman:

> The higher law by which teachers' salaries are graduated by the quality of service rendered, and the law of supply and demand, will not be set aside for their benefit; that law is unchangeable and inexorable; it is a cold, relentless, emotionless principle of political economy which has controlled the whole question of wages with a pitiless and despotic sway for centuries past. Hence the thing to do is to quit weeping and wailing over low wages and the non-recognition of the teachers' profession, so long the twin themes of unmanly lamentation, and go to work. There is plenty of room higher up. If you are willing to spend the time, thought, energy, perseverance, and money vital to the best preparation and service, the world will recognize you, appreciate you, reward you.

The trouble with this policy is that it presumes a larger measure of interest in education and knowledge of good teaching than school boards yet possess, or are likely to possess for a long time to come. Teaching is harder to judge than any other form of expert service. In most services requiring special knowledge or skill, if we cannot judge of the work while in progress, we can judge of the results. If the blacksmith is unskillful, the horse goes lame. If the builder is a botcher, his roof leaks, his doors sag, his paint scales, or his plaster falls. The poor lawyer loses his case; the physician, his patient. But for poor teaching there is no prompt or ready test. In fact, most otherwise intelligent people have very hazy notions of what the school ought to bring to

pass. Our people believe in "education," without knowing exactly what the word means.

Suffice it to say that from a good school the youth should come forth with a body sound, healthy, graceful; with a mind furnished with a goodly stock of knowledge of the sciences that underlie our civilization, and of the best literature in which its ideals and spirit are expressed. It will have trained his powers of perception and reasoning; it will have established that scientific spirit that does not believe and take for granted, but weighs and considers; it will have secured reasonable proficiency in reading, writing, drawing, computing, singing, speaking, and the art of good behavior.

The daily administration of the school will have established habits of punctuality, order, industry, courtesy, and self-control, of fidelity to obligations, and a due sense of responsibility. It will have implanted high ideals of life, the love of excellence, a passion for justice, a chivalrous sense of honor. In brief, the school should turn out—to adapt the words of Milton—honest, honorable, high-minded men and women able to discharge justly, skillfully, and magnanimously all the duties of public and private life.

Now, the best teaching will not always bring this to pass. It may be nullified by the influence of home and street, of press and stage. The point is that few employers know what to expect from the schools; fewer still can separate the mingled currents in adult knowledge and character, and trace each to its source. In any case, to judge of today's schools by results, we must wait a generation. Evidently, then, those charged with the employment and supervision of teachers must be able to know good teaching when they see it.

Now, the average layman asks only two questions: "Do the children like the teacher?" "Does he keep order?" Both are good tests, as far as they go; yet this audience knows that the affection of children is easily won—quite as easily by him who entertains as by him who instructs. The value of order in the schoolroom depends very much upon whether it is secured by threats and bribes, by appeals to fear or selfishness, or whether it is secured thru the preoccupation of the children in interesting and profitable work. What we call the atmosphere of the schoolroom is not a decisive test. Often school exercises that seem skillful or even beautiful are, when judged by standards of ultimate educational value, useless or worse.

I cannot argue this point further. I submit the proposition to your serious judgment that in no other form of service is the difference between true excellence and mediocrity harder to detect. This fact puts trained and worthy teachers at a serious disadvantage in competition with relatives of the board, with "deserving girls" from the "home school," and the general pressure of "economy." So long as teachers are everywhere employed by local boards, and are licensed by a county superintendent elected by popular vote, the silent plea of effective service will not alone bring the salary deserved.

The second remedy is the policy that has been so effective in raising wages

it is a veritable calling; there has been something of a spiritual summons; an ideal of bettering the world thru the ministrations of the school. Along with these inducements has been the salary, which we have valued nearly as much as a mark of the public respect accorded us as for the material comforts that it commands.

Now, as compared with other occupations, it seems to me that the moral or spiritual inducements to become a teacher are as potent as ever. But the question of salary is becoming in every sphere of activity a larger consideration than it has been in the past. The cause is fundamentally in the industrial changes that have removed the domestic industries from home and farm to factory and shop. Our pioneer forefathers produced with their own hands nearly everything in and about their homes. They saw little of the wares of the merchant. Their luxuries and personal adornments were largely the product of their own taste and skill. Now the world buys and sells relatively five times as much as a century ago. We serve others, and are served by them in turn. The measure of comforts that we shall enjoy depends very largely upon our command of the market. The standard of living is determined by these changed conditions. In spite of all the moralists may say in praise of the simple life, teachers know that, to retain a due measure of respect in the eyes of the public, if not in their own, they must in dress, in style of living, pay some regard to prevailing standards. The teacher, therefore, is not to be upbraided because he sometimes turns from his work to consider the question of pay. It is true that, whether his salary be great or small, he owes all that he can give to the children under his care; but when the day for signing a contract has arrived, it is his privilege to make the best possible bargain.

Teachers' salaries, as a whole, have undoubtedly made a great gain in the last thirty years. Thus in Illinois the average for men has risen from $48.19 to $67.33 per month. Women's average monthly wages have risen from $33.46 to $57.95. This is for the entire state. The increase, however has been mainly in Cook County, employing one-fourth of the teachers, and in a few large cities outside. In 62 counties out of the 102 the average salary of women teachers is less than $40 per month; in 4 it is less than $30. In 10, men are paid an average salary of less than $40 per month. The 10,000 teachers in our rural schools average less than $300 per year. From the report of your committee it is evident that similar conditions exist in every northern state east of the Missouri River, with the exception of Massachusetts, Rhode Island, New Jersey, and Indiana. In 36 Illinois counties the average monthly wages of men teachers are lower than thirty years ago. In 18, women are paid less.

In the meantime the population of the country has doubled; its wealth has trebled. Land and all products of the land have risen in value. Wages for every other species of service demanding skill and fidelity have risen. Even where teachers are most liberally paid, all skilled mechanics—bricklayers, machinists, molders—enjoy a larger annual income, while the common

laborers on the streets and sewers are better paid than the lowest teacher in these same cities.

In 1902, the last year for which we have complete statistics, the average annual earnings of all the workers—men, women, and children—in fifty-five leading manufacturing industries in Illinois was $502.92. The average annual earnings of men teachers the same year was only $490.69.

It is not necessary to multiply evidence upon this point. It is a matter of common knowledge that the country schoolmaster is fortunate whose net earnings are better than those of a good farm hand. Many good teachers earn less than stenographers, seamstresses, and cooks. Our wages have remained practically stationary, while the cost of living has advanced nearly 20 per cent. Moreover, the demands upon teachers have multiplied. Institutes, books, periodicals, and summer schools have brought home to them the need of professsional preparation. When this need is realized, the conscientious teacher feels that he must obtain the preparation or quit the ranks. I believe today that the demand for this preparation is stronger among teachers than among employers. I have personally known several promising teachers who have left the work because they keenly felt this need, but could not realize from present salaries enough to make the necessary expenditure.

The inadequate compensation is not because our people as a whole do not believe in education, nor spend money generously for its support. During the past twenty-five years the cost of public education in Illinois has increased 175 per cent., while the population has increased only 70 per cent.; but the enlarged expenditures have been for fine buildings, for equipment, apparatus, libraries, and especially for developing the somewhat expensive high schools in our cities and towns. Salaries in the elementary schools have seen the least advance.

A fine school building especially appeals to the American spirit. It is the pride of the town to be exhibited to the prospective investor. It is regarded as a wise expenditure for advertising purposes. But teachers' wages are largely determined by custom. No organization or trades-union methods have been operative to force them up. Competition has been unrestricted. With unrestricted competition, wages are bound to sink to the lowest level at which laborers will consent to live. This level is reached in that large class of young women, fresh graduates from the public school, who, while living with their parents, are willing to accept any small salary sufficient for their personal expenses. Wherever school boards are willing to employ teachers with this standard of preparation, all discussion of the salary question is useless.

What wages should teachers receive? What wages should be paid for any service? The answer is: Society should provide for all its servants charged with any vital function the conditions and means essential to effective service. Teachers should be free to teach. The citizen teacher of the early days could teach in winter and farm in summer. Few teachers are content with the standard of excellence then possible. Excellence in the calling now involves professional training, books, magazines, summer schools and institutes, travel,

or less; only 16 received as much as $1,000. The next year the legislature established minimum salaries of $600, $800, and $1,000, according to the number of schools in the county, and a maximum of $1,252. After twenty years these results appear:

The maximum salary is paid in 84 counties, altho required by law in but 60 counties.

The limitation, while possible in 42 counties, is applied in only 18.

In no county is the salary held down to the limit permitted to the county board.

At a convention of school officers I heard one say: "I believe we are all agreed that salaries in this county ought to run ten dollars a month higher than they do; and I believe we are also agreed that the present teachers are not worth more than they are getting." For such a condition a law providing a decent minimum is a remedy. Surely better teachers will not appear until salaries are improved. High salaries attract and retain superior teachers, and make it possible to raise the standard of qualifications. If paid for a year or two to the present poorly qualified force, they are enabled to qualify themselves by further schooling for meeting the advancing requirements.

In many states a minimum-salary law will not be effective unless supplemented by suitable means for securing a high standard of qualifications. This will not always result automatically from better pay. Some rural districts and most villages are scarcely able to raise revenue enough to pay liberal salaries under the revenue laws of many states. The number of such rural districts is not great. A minimum-salary law might impel small and weak districts to consolidate. In the states where schools are supported mainly by local taxation, there should be provided a state school tax supplying one-third of the total school revenue, to be distributed in such a manner as shall especially encourage backward districts. In our great cities the wealth on the avenues helps to educate the children in the slums. No argument is needed here for the wisdom of such policy. In the same way the wealth of all the state should stand pledged for the schooling of all the children in the state, no matter where the children may happen to reside. The bulk of the funds should still be raised by local taxation to stimulate in the people local pride in *their* school, and at the same time promote a due economy in expenditure.

I believe, Mr. President, that the next step in the salary campaign should be to secure the enactment of minimum-salary laws in the various states, supplemented by such other legislation as may be needed to make them effective. There seems to be no way to overcome the inertia of our village and rural communities. As a great body of public servants charged with a function most vital to the prosperity and perpetuity of the commonwealth, we may with dignity and self-respect ask from our legislatures such compensation as will enable us to do the work whereunto we are called.

We shall continue to present our claims with dignity and moderation, confident that the sense of justice and the generous disposition of the American people will give them due recognition.

The third remedy is legislative action prescribing the minimum salary that may be paid. Five states have recently enacted such laws. Pennsylvania makes the minimum salary $35 for at least seven months. Maryland makes it $300 for the year. West Virginia provides minimum monthly salaries of $40, $35, $28, respectively, for the three grades of teachers' licenses. South Dakota provides a minimum of $45 for the better grade teachers. The Indiana law enacted in 1903 provides that in the case of beginning teachers the daily wages shall not be less than 2¼ cents multiplied by the scholarship grade on his license. After the first term of teaching the multiplicand is 2½ cents; after three years, 2¾ cents. The multiplier is increased for attendance upon the annual institute and for professional ability or schoolroom success.

The examinations for teachers licenses are uniform thruout the state; 85 per cent. is the minimum grade upon which a license can be issued. Under the provision of this law, the poorest teacher in Indiana cannot be paid so little as $40 per month. In three years the law has effected an average rise in teachers' wages of 36 per cent. The increase has been all along the line, but greatest in the salaries of women teachers in rural schools, who now receive in Indiana an average monthly salary of $49.77, while in sixty-two counties in Illinois the average salary of all women teachers is less than $40 per month of twenty-one days teaching.

There can be, I think, no valid objection to such legislation. Teachers are public employees. The salaries and fees of many public officers in minor political divisions are prescribed by statute. In most of the states the legislature has made only general provisions for schools, leaving to the discretion of the various districts the amount of money to be raised, the salaries paid, the length of the term, the branches to be taught, and the selection of the teacher. In experience it has been found that the intelligence and public spirit of some communities are not sufficient adequately to execute the educational purpose of the state. The legislature has been obliged to play the schoolmaster by requiring a certain length of school year and prescribing the qualifications of teachers. A minimum-salary law is only another step in the same direction. It recognizes that the education of the children of the state is the concern of the entire state, and not merely of families or neighborhoods. It brings the intelligence and the authority of the commonwealth to the support and assistance of localities where educational sentiment is weak.

The fear is sometimes expressed that the passage of such a law tends to create the sentiment that the prescribed minimum salary is sufficient. I have yet to learn of any such law's working that way.

Prior to 1884 the salaries of county superintendents of schools in Illinois were fixed by county boards. Thirty-eight of them in that year received $400

ber, 1904) the report was presented by Professor Thomas, on whose motion the association resolved that the president of the association appoint a committee of five to examine the report and suggest what, if any, amendments are desirable before the alphabet proposed by the Joint Committee should be submitted to the association for final action.[1] This Revising Committee of the Modern Language Association consisted of Professor E. S. Sheldon, of Harvard, chairman; Professor James W. Bright, of the Johns Hopkins University; Professor C. H. Grandgent, of Harvard; Professor Raymond Weeks, of the University of Missouri; and myself. Its reports were presented Weeks, of the University of Missouri; and myself. Its report[2] was presented to the Modern Language Association at its meeting at Haverford last December, and was unanimously adopted and ordered printed. The same report was presented to the American Philological Association at its meeting in Ithaca a day or two later, and was also unanimously adopted, the association voting that it sanction the alphabet and recommend its use to the makers of dictionaries, and that the report of the committee be printed in the *Proceedings*.

The phonetic alphabet that has thus received the sanction of these two national philological bodies is not a new invention. It is based upon the phonetic alphabets already in wide use in philological books in Europe and America, notably the alphabet of the International Phonetic Association,[3] the alphabet employed in the great Oxford English Dictionary,[4] and the alphabet sanctioned by the American Philological Association in 1877.[5] In many respects these alphabets are alike. Where they differ, choice was determined by certain important considerations. In general, the simplicity of the alphabet of the International Phonetic Association was aimed at. In the selection and the employment of individual characters, those of the Oxford Dictionary were, in most cases, preferred, that thus there might be no unnecessary deviation from the practice of what will for a long time remain the greatest English dictionary. But the two happy forms employed in the old alphabet of the American Philological Association for the vowels in *or* and *but* were preferred to the less suggestive and more awkward forms employed in the other alphabets.

It may be asked: What is the common basis of all these alphabets? It is the Roman, as adapted to English phonology by Henry Sweet.[6] For the English sounds that do not occur in Latin, variant forms of Latin and Old English letters are made use of. (For detailed information, see the Report of

[1] *Proceedings* for 1904, p. xii.

[2] *Report of the Committee of the Modern Language Association on the Proposed Phonetic Alphabet*, a pamphlet to be had of Professor E. S. Sheldon, Cambridge, Mass.

[3] See *Aims and Principles of the International Phonetic Association*, a pamphlet to be had of Professor Paul Passy, Bourg-la-Reine, Seine, France.

[4] *A New English Dictionary on Historical Principles* (*Oxford University Press, New York*).

[5] A modified form of this is employed in the *Standard Dictionary*.

[6] In his *Handbook of Phonetics* (out of print) and his *Primer of Phonetics* (Oxford University Press, New York).

the Committee of the Modern Language Association, p. 131 above.) No other basis has half the claim that the Roman has. The adoption of it simply means a return to what was the foundation of all western alphabets, our own included. Most European languages have departed but little from the Roman, hence a return to the general virtues of the original is not only natural and simple, but by far the most scientific and the most practical procedure. The inadequacy of the system now employed in most English dictionaries is betrayed by the many strange and inconsistent diacritic marks that must be used to eke them out. The new alphabet limits the use of diacritic marks to a minimum; and when it employs such a mark, it does so consistently—that is, the mark has the same value or meaning with whatever letter it is used.

A child that has learned the new phonetic alphabet in the primary school would require less than an hour's instruction in the pronunciation of Latin, while the task of learning the pronunciation of German and most other European languages would be reduced to a minimum. Instead of almost invariably doing the wrong thing when confronting a foreign word or name, the average English-speaking person would instinctively hit it right nine cases out of ten. What an immense gain this would be for the now isolated English-speaking peoples, it is easy to see. Of even greater importance is the immense saving of time, referred to above, for all those engaged in learning and teaching Latin, German, and other foreign languages.

But both of these may be regarded as minor matters compared with instruction in English itself. With the so-called English values of the letters, it is impossible to teach the truth as to English sounds. This is due in part to the great revolutions that have taken place in the English vowel system. The Old English long vowels have changed immensely while the short vowels have shifted but little, or not at all. In this way the former have long since parted company with the corresponding shorts, and the continued association is not only absurd, but very misleading. What we call "long *e*" now has nothing to do with what we call "short *e*," and so on thruout the list. Arranging the English vowels physiologically with our current spelling, in the most consistent form, we have:

fool *feet*
full *fit*
no *fate*
obey *met*
all *nut* *fur* *there*
or *fat*
far *past*

There could hardly be a greater mix-up of letters, and any attempt to comprehend the sounds and their relations on such a basis of representation futile.

The various systems of phonetic representation current in most of

phonetic alphabet, not only for English, but for all the most important modern languages.[1]

Whatever the interrelations of these movements, no one of them is dependent upon the other two; and any man may favor and advocate one and be indifferent or hostile to the others. It is therefore necessary to be careful not to transfer thoughtlessly to the others such unfriendly feeling as one may chance to entertain for one of them. For example, many a person who is averse to spelling reform will, on consideration, find much to enlist his sympathies for the movement that aims to furnish a uniform system of representing English sounds and groups of sounds. It is this latter movement about which I wish to say a few words this morning. I shall limit myself to stating what is aimed at, and to pointing out the chief advantages of the project.

The movement originated in the minds of members of this Association and in response to a great need felt by practical teachers. No one or two dictionaries now hold the field and wield authority. The growth of scholarship and the development of the English-speaking world have demanded and made possible the preparation and sale of many good dictionaries. These have different systems of indicating pronunciation. When it is necessary to look up a word and compare authorities, the searcher is at once confronted by the task of deciphering and interpreting the various letters and diacritic marks employed, and these are so different and so differently used in the various dictionaries that it is often almost impossible to find out and remember what the authorities have to say on the subject. If teachers and other adult users of dictionaries find this process beset with difficulty, what must it be to the children in our schools? How serious this matter is and how real the trouble, one may estimate when he learns that practical dictionary workers, the men who make dictionaries and are daily employed upon them, and who are supposed to know the different systems thoroly, constantly find themselves misinterpreting and confusing the signs employed.

I may cite one or two cases in illustration of the difficulty that confronts the users of our dictionaries. The pronunciation of *either* is given in most dictionaries as *ē* or *ī*, in the Oxford dictionary as *ī* or *əi*, in the Standard as *î*. Now, all these mean the same, except that the Standard does not care to recognize the younger pronunciation. But who will blame the boy who comes back from a search of the dictionaries and says that the Oxford Dictionary favors the pronunciation with *ei* sounded like *eye* and that the Standard allows only this? When one finds the pronunciation of *mustache*, or *moustache*, given as follows, what is he to make out of it? Cassell *u̇a*, Century *u ȧ*, Imperial *u̧ a*, Student's Imperial, *o͞o ȧ*, International *o͞o ȧ*, Standard ʊ ɑ, Shormonth *o͝o ȧ*, Webster's Collegiate *u̇ ȧ*. The markings represent fine different pronunciations, but, of course, it will not do to associate these with the differences in marking, for the same sound has one sign in one dictionary and another in another, and the same sign has different values in different

[1] For information address: Professor J. Geddes, Jr., Boston University, Boston, Mass.

dictionaries. Indeed, the same dictionary often uses different signs for the same sound. Thus Webster's Collegiate and the International respell *soon* with *o͞o*, and *true* with *u̇*, and Cassell's prints *o͞o* in *soon* and *u̇e* in *true*. The pronunciation of the two last letters in *bring* and *brink* is represented as follows:

International	Standard	Cassell	Century, etc.	Oxford
bring	*bring*	*bring*	*bring*	*briŋ*
briŋk	*briŋk*	*briŋk*	*bringk*	*briŋk*

All these markings mean exactly the same thing, but what child could be expected to find that out? Further examples would make the absurdity of the usual systems even more evident, but this is unnecessary.[1]

It is clear that we must do one of three things: (1) Let the matter go, and permit our pupils to continue to wander in a maze of confusion and uncertainty. (2) Banish all but one dictionary from the school-room, and suffer the consequent limitation of knowledge. (3) Establish a uniform phonetic alphabet. Fortunately, it was the last of these that was decided upon. The initiative was taken at the meeting of the Department of Superintendence in February, 1903, when a committee representing the National Educational Association was appointed to confer with like committees of the Modern Language Association and the American Philological Association, and recommend a universal system of notation for indicating pronunciation, or at least a simple practical phonetic alphabet.[2]

At the conference held in Boston (July 9, 1903), Professor Calvin Thomas was made chairman and was instructed to appoint a joint committee of five, of which he should be chairman, to prepare a report to be submitted at a subsequent meeting of the joint conference. The other members of the Joint Committee were Professor O. F. Emerson, of Western Reserve University; Dr. C. P. G. Scott, of the Century Dictionary; Mr. E. O. Vail, then editor of *Intelligence*; and myself. This committee made a tentative report in the summer of 1904 and published it in the form of a pamphlet.[3] At the request of the representative of the National Educational Association, in order to facilitate progress, this report was presented by the representatives of the American Philological Association and the Modern Language Association directly to these associations at their next meetings.

At the meeting of the American Philological Association (St. Louis, September, 1904) it was voted[4] that the association entertained a serious interest in the deliberations and recommendations of the Joint Committee and requested those members of the committee that represented the association to continue in that capacity and to submit their final report when ready.

At the meeting of the Modern Language Association (Providence, Decem-

[1] A comparative table of the vowel-notations used in the more important dictionaries will be found in the Report of the Joint Committee. See p. 131, footnote, below.

[2] See the *Proceedings* of the National Educational Association for 1903, p. 140.

[3] *Report of a Joint Committee . . . . on the Subject of a Phonetic English Alphabet*, to be had of Professor Calvin Thomas, Columbia University, New York.

[4] *Proceedings* for September, 1904, p. xxvii.

In view of its importance, it is not claiming too much to say that this report should be studied by every country-school teacher and school officer who has to do with the administration of the country school system. Some way should be provided to create a demand for this document. No better use can be made of a part of the surplus of the funds of the National Educational Association than to send a number of copies of this report to county superintendents, to distribute to thinking teachers, school officers, and patrons of country schools. Not all county boards are as liberal as the one which permitted its county superintendent to purchase 300 copies for distribution in his county. A free distribution of this report will tend to increase the prestige of the National Educational Association as respects leadership, and at the same time remove part of the nervousness on the part of its membership as to the safety of its ever-increasing surplus funds.

This paper will enter into no argument with respect to the why and how of industrial training for the country child. The report referred to does this in a most logical and admirable manner. A twenty-minute discussion will permit only an emphasis to be placed on a few practical and suitable things that can and should enter into the all-around symmetrical development of the country child in his training for service in the new age of country life.

My discussion calls for a consideration only of "What Form of Industrial Training is More Practical and Best Suited to the Country Child."

All those interests and activities that relate to agriculture in an elementary way—quite elementary for a while—are practical and suited for the training of the country child. The prosperity of this nation in its last analysis rests upon agriculture. A very great majority of the children enrolled in the country schools will remain on the farm, and the country school should help them to a better understanding of the new phases of agriculture. The number remaining on the farm will increase when right ideals prevail in the instruction with reference to the dignity, worth, and financial possibilities of the kind of farming that is "higher education."

To be specific, a study of soil by means of the school garden is practical to a certain extent in every country school. To be sure, a live teacher will get more out of it than a dead one who does not yet even know she is dead. But something is done and can be done. A start is being made. To wait till all the teaching force is ready is to do nothing.

Last year the Department of Agriculture at Washington surveyed over fifteen million acres of farm land. The state of Illinois is spending $25,000 annually in its soil survey and soil experiments. Thus far sixteen counties have been surveyed, and the expectation is to continue till the entire 102 counties are surveyed. Every type of soil as small as ten-acre lots is mapped and described. A various-colored map is published and put in bulletin form.

Here is a map of one county [showing] which gives you an idea of the work of the soil bureau. You see the different types of soil for this particular

county represented by different colors. The printed matter in connection with this map gives an accurate account of the early settlement, climate, physiography and geology, description of the types of soil, agricultural conditions, markets, transportation facilities, etc. Laying aside all thought of industrial training, and the so-called elimination of "culture," and the alleged "making farmers" of our country children by "putting agriculture" into the country school, just think how valuable this bulletin is simply for the study of home geography! Surely there is time for the study of geography in the average country school. A copy of this map and bulletin was put into the library of every country school of this county. The expense was nothing. And this map, so far as it goes, is far more valuable for the teaching of agriculture than the so-called agricultural charts for $40 which some school officers are buying of agents who are posing as apostles of agricultural instruction for the country school.

We are not quite accurate when we speak of "putting agriculture into the country school." Rather let us attempt to put the school into agriculture —into right relation to its environment.

A school garden is practical. True, it is in its experimental stage as yet. So was manual training for the city child, and is so to a certain extent today. But no one would eliminate manual training because teachers do not yet know all about matter and method. We do not know all about the school garden as a means of giving instruction with reference to soil and plant life. We can learn, however, and learn by doing, even if the doing is crude for a few years. The best way to have a garden in the country school is to have it, even if it is not larger than four feet square. A start can be made, and that is a great deal. To sit down and contemplate the difficulties is to remain seated.

School-garden work, manual training, and domestic arts for the country school will be put on a more intelligent and permanent basis when there can be trained supervisors for this work, such as many city schools now have. This will come when the county superintendent can change the ideals of the country people so that they will regard the office for educational leadership, and not subject to the exigencies of party politics. The job of changing the ideal in this respect is a fairly big one.

True, if we could have such gardens as the Macdonald gardens of Canada, better results would be obtained. If millionaires of this country would find it possible to do as this man is doing—doing something for the country child—a great educational uplift would come to all phases of country life. Here [showing] is a most interesting pamphlet describing the Macdonald gardens. There are special traveling instructors for these gardens, which are two acres in extent. One or two quotations are sufficient to reveal their character.

With reference to the place of the garden in school work:

> The work of the garden is recognized as a legitimate part of the school program, and is already interwoven with a considerable part of the other studies. The garden is

dictionaries and school books are particularly defective in that they do not provide signs enough for the different sounds. They are thus forced to add letters—not to represent the sound they nominally stand for, but to indicate that an adjoining letter has a different sound from what it usually has! It is as tho a new settlement in the West, instead of getting a new name, should take the name *Chicago* and then attempt to indicate by the addition of the name *Detroit* that it was not Chicago that was meant, but a new place that hadn't any name of its own. Certainly as perverse a method of doing things as one can imagine. This is what we do when we write *th* or *dh*, *sh* or *zh*, *ch*, *ng*, etc. Such a spelling as *ch* gives no idea whatever of the sounds it represents. There are two sounds and two letters, but neither letter represents either sound! The first sound in the group is *t*, the second is the sound usually spelled *sh*. Thus *catch* and *chip* differ from *cash* and *ship* in having a *t* before the sibilant. This makes it very clear how *nature* has got its present sound. The first element of the group that we call "long *u*" has, under the influence of the preceding *t*, become the sibilant usually spelled *sh*—that is all. When we attempt to use *ch* as a phonetic spelling, the phonetic facts are concealed. Indeed, it is difficult to persuade most people that *chip* begins with *t*, tho they will admit it in *catch* because it is written there. Similarly, in the case of *ng* in *bring* above, and in *long*, etc. In *brink* and *longer* we observe that we have a pure *k* and a pure *g*, each preceded by a nasal that is not the *n* heard in *in*, which is made by raising the tip of the tongue, but a similar sound made by raising the back of the tongue. In phonetic spelling this sound is represented by an *n* with an extended leg, namely *ŋ*. Now, longer still has this *ŋ*+*g*, but *long*, while it still has *ŋ*, has lost the *g*. But the spelling *ng* so takes possession of the mind that it is very hard to make most people realize that there is no *g* at all in *long*, or that when a man says *walkin* for *walking* he is simply raising the tip of his tongue instead of the back of it, that is, using *n* for *ŋ*—and not "dropping the *g*," which was dropped long, long ago. If we use *ng* as a phonetic spelling for *ŋ*, we are forced to the absurdity of using *ngg* and *ngk* to represent *ŋg* and *ŋk*. Compare the spelling of *bring* and *brink* above.

We have considered the advantages of a phonetic spelling based on the Roman values of the letters (1) in the study of foreign languages and the learning of foreign proper names, and (2) in the study of English itself. There is still another situation in which it has importance. English is now spreading as no other language is. It is studied everywhere, and in many places it is crowding out the native language. In this we are all much interested, and we surely should do all we can to promote it. By presenting to these foreigners, if not a reformed English spelling, at least a phonetic respelling that will give them quickly and exactly the information they desire, we shall do not a little to teach good English to the inhabitants of our dependencies and to spread our mother-tongue thruout the world.

WHAT FORM OF INDUSTRIAL TRAINING IS MOST PRACTICAL AND BEST SUITED TO THE COUNTRY CHILD?

O. J. KERN, SUPERINTENDENT OF SCHOOLS FOR WINNEBAGO COUNTY, ROCKFORD, ILL.

It is to be regretted, perhaps, that we do not have a better term to express the thought of this afternoon's program. For a great many most excellent people today, moving along Educational Avenue leading up to the public school, shy and stop still at the sight of the word "industrial" as applied to the work of the school. Any attempt to lead them closer for a more careful inspection of this word proves unavailing. To their thinking industrial training means the elimination of "culture," whatever that may mean, and the substitution of the reform school or the trade school. For them the thought has not yet come that education should be for service as well as for sweetness and light; that the children in our schools should be able to do things as well as to know about things. And in the doing of things there is as great opportunity for culture as there is in studying about what men have said and done, as revealed by the printed page.

The distinction between higher education and industrial education has no real foundation upon which to rest. It is a survival of the aristocratic ideas of the Middle Ages. The thought is not original with the writer to claim that farming and blacksmithing are just as high as law and theology. Whether it is better to be a blacksmith than a minister depends. As has been well said recently: "It is better to pound an anvil and make a good horseshoe than to pound a pulpit and make a poor sermon."

Quoting further from this same writer:

> There is a real distinction between education for self-support and education for self-development; between culture and what the Germans call the bread-and-butter sciences. In order, if not in importance, the bread-and-butter sciences come first. The first duty every man owes to society is to support himself; therefore the first office of education is to enable the pupil to support himself.

And, as has been said above, industrial education, if carried on aright, contributes to self-culture as well as to self-support.

It is taken for granted that everyone present this afternoon believes that this body of superintendents and the National Educational Association stand for educational leadership. Their deliberations and printed reports should give the trend and tone to educational progress in our country. A student of industrial education for the country child cannot fail to express his deep obligation to one printed report which is in trend with this afternoon's consideration. This is the 1905 report of the National Educational Association on "Industrial Education in Schools for Country Communities." The committee which formulated that report was composed of expert students of this particular field, and there is no one better qualified to speak with authority than its chairman, Superintendent L. D. Harvey, of Wisconsin.

becoming the outer class-room of the school, and the plots are its blackboards. The garden is not an innovation, or an excresence, or an addendum, or a diversion. It is a happy field of expression, an organic part of the school in which boys and girls work among growing things, and grow themselves in body and mind and spiritual outlook.

Of the advantages the following summary only is given here:

1. Educationally it affords a release from the dull routine of the school-room and puts the pupil out into the fresh air and sunlight. It is a means of help by affording scope for motor activities that are natural to growing children. The garden work is correlated with much of the formal work of the school, as arithmetic, reading, composition, drawing, etc. It serves as an introduction to the development of literary appreciation, as the "ability to appreciate the charm of many of the best poems depends not a little on ability to form visual images of natural objects." In this respect, if the teacher in the country school is alert, the country child has the advantage over the city child. For "the urban eye of the town-bred child, who has never been interested in garden or field, must fail to catch the imagery of our best nature poems."

2. Economically the school garden teaches the composition and care of the soil, best conditions for plant life, value of fertilizers, seed selection.

3. Nationally the school garden develops an interest in the fundamental industry of the country. There develop the sense of ownership and respect for property.

In the care of their own plots the pupils fight common enemies, and learn that a bad weed in a neglected plot may make trouble for many others. The garden is a pleasant avenue of communication between the school and the home, relating them in a new and living way, and thereby strengthening the public interest in the school as a national institution.

A study of the development of plant life is practical and suited for the country child. For years we have had the thorobred horse, the pure-bred cow, and now comes the high-bred corn. Here is an ear [showing] of high-bred corn raised by the president of the Illinois Corn-Growers' Association. This was taken from a field that easily made one hundred bushels per acre. To be sure, to raise hundred-bushel corn there must not only be one-hundred-bushel seed, but also hundred-bushel soil and a hundred-bushel man. Our industrial training should teach the children in the country schools to strive for these three things, viz.: better seed, increasingly fertile soil, and more intelligent methods of operation. Here is an opportunity for the school to co-operate with the home and train the children to study corn on experimental plats at home.

Likewise some training with reference to farm animal life and a consideration of some of the elementary principles of the business end of farming is practical and suitable. Farm economics is practical arithmetic, and could well take the place of much text-book matter that is "taught at." Surely, the average country school has time to teach the arithmetic that the pupils must use after leaving school.

With the country high schools—that is, the village high schools—and the country consolidated school as centers, manual training for the country child should begin. From these schools this educational activity will spread into a large number of one-room country schools. This will be slow; for the average farmer does not yet distinguish between manual training and manual labor. If all the data could be collected, it would appear that quite a considerable amount of manual training, elementary in form, is now being carried on in the country schools.

Here is a great opportunity for the school to co-operate with the country home; and thru the inspiration and help of a live teacher a work-bench can be installed in the home workshop, if it seems impracticable to install one in the country schoolhouse. The boy at home, and the girl too, along home economy, can make a small collection of simple tools, and from the teacher receive instruction as to processes of work, etc. The country school and the country home should come closer together. The lines of industrial work suited to the farm and farm home offer an exceptionally fine opportunity for this closer union for a common purpose. Most of the old farm home activities have gone since the introduction of farm machinery of improved make. With this change have gone some elements in the training for the country child that must be supplied by the new country school and the new farm home, to meet the new conditions of country life in the age of telephones, trolley cars, daily delivery of mail, improved farm machinery, discoveries relating to the science of agriculture, and improved methods of farm operations.

For the boy this manual training will consist in a working knowledge of the care and use of simple tools for repair work on the farm, the elements of simple carpentry, farm mechanics, etc. With this will go a practical knowledge of materials.

For the girl there will be instruction in household economy and management, food materials and the preparation of food, sewing and a study of textiles, etc.

There need be no alarm that the country child will not receive culture along these lines. As has been well said:

> To teach a boy the mechanics of homekeeping, to teach a girl the chemistry of homekeeping, is as much self-culture as to teach either what kinds of homes the ancient Greeks and Romans possessed. Our present self development is too narrow. We need to broaden it. Manual training is necessary to make the "all-round" man.

We can take this culture to the country child, and in addition take to the country school good books, art, and music, and we need no longer be under the necessity of tearing up the farm home by its roots and taking the children to the city in order to secure the country child's right to partake of the best educational opportunities that the age has to offer.

FORMS OF INDUSTRIAL EDUCATION BEST ADAPTED TO CITY CHILDREN

CHARLES H. KEYES, SUPERINTENDENT OF SCHOOLS, SOUTH DISTRICT, HARTFORD, CONN.

The traditional subjects of the school curriculum aim to train the child thru exercises whose perception basis is either visual or auditory, or both. The child's seeing and hearing alone, condition all his learning within the scope of the time-honored subjects. But manual training aims at the development of the individual thru the introduction of experiences based on other sense-perceptions than those of sight and hearing. Touch and muscular resistance are called into play because they furnish, independently and in conjunction with the other sense-avenues, experiences which react in the development of nervous centers and forces otherwise left practically impotent, so far as the training of the schools is concerned. In deciding what forms of manual training are especially valuable for the child of any determined environment, certain governing principles must be kept clearly in mind:

1. This training must develop capacity which is a new, additional positive contribution to the child's unconscious endeavor at self-realization, and the school's conscious endeavor to transform his possibilities into powers.

2. This training should furnish him experience which enlarges his capacity to adapt himself more easily and efficiently to his life-work and environment when school days are finished. He should begin to learn as a boy things he must do as a man.

3. This training should not neglect to furnish him some experiences lying entirely outside the field of his prospective life-activity, and especially some of that class of experiences which will enable him to understand and sympathize with the endeavor and aim of large groups of his fellow-men whose surroundings and occupations are decidedly unlike his own. He should begin to get the view-point as a boy of a position he will not occupy as a man, but which will be occupied by thousands of his fellow-men with whom the good of the commonwealth and the nation demands that he shall have intelligent sympathy.

4. This training is the resultant of exercises in which the pupil is making high endeavors at self-expression. His ideals of strength, utility, beauty, and honesty are modeled in the clay, cut and carved in the wood, bent and forged in the iron, braided and woven into the raffia and reeds which he manipulates.

With these principles in mind, and a recognition of the fact that the immediate direction of the manual-training work of the great majority of city children must be in the hands of the regular grade teacher, we may proceed to make some specific answers to the question: "What forms of industrial training are best suited to the child of any determined environment?"

Obedience to the first and fourth of these principles will eliminate some

of the common forms of manual training frequently used as pedagogical soothing syrup, under the name of "busy work," in many primary schools. It will do away with much of the work on hard and fast models, in which the pupil has little or no choice or initiative, and which admit of only a comparatively low order of self-expression.

So far as the life of any particular city or class of cities is distinctive, its conditions must guide us in applying the second and third principles, which chiefly determine the forms proposed for our discussion.

Recognition of the principle that in manual training and industrial education the pupil should be taught to know and do, as a boy, things which he will have to do as a man, is now widespread. We have ceased to apologize for any special form of manual training having educational value, because it gives a boy the skill of a craft in which he may later earn his living. We are no longer ashamed to acknowledge that many of our pupils are taught in our schools the very art or arts whose exercise in the business world gives them their support. This conclusion is the only justification for the large place that cooking and sewing have long enjoyed in the schools of our most progressive cities. Call it trade-school work if you will, but remember that all our girls must be trained for the vocation of homemaker, and be skilled either in practising these two arts or in the direction, supervision, and training of others in their exercise.

I may probably best indicate by illustration what I deem to be wise operation of the law that the special character of the business life of a city should affect the forms of industrial education in its schools. My own city (Hartford) is known thruout the business world as a banking, insurance, and manufacturing center. We employ thousands of clerks, accountants, copyists, bookkeepers, typists, and stenographers in these offices of our banks, insurance companies, and factories. The factories are devoted largely to the production of high-grade metal manufactures. Our guns and automobiles, our tires and bicycles, our typewriters and automatic machinery, go into every quarter of the world where efficiency is prized. In their production we employ thousands of machinists, pattern-makers, draftsmen, smiths, and other high-grade mechanics. The ranks of all these must be annually recruited from the boys trained in our public schools.

We recognize, accordingly, that penmanship has in our schools a place which it is not generally accorded or entitled to in many other cities. We deliberately teach it as an important manual art all thru the nine grades of the grammar schools, and in the high school as well. Similarly, work in wood and iron is begun as low as the fifth grade of the grammar schools and carried thru the high school. Drawing and design begin in the kindergarten, and are available thru every year to the end of the high-school course. Typewriting, stenography, and bookkeeping are taught in our high school. Our work in pattern-making, mechanical drawing, and machine-shop practice is more extended than might be justified in a city of different commercial life.

Our evening high school has not hesitated to undertake the training in its shops and drafting-rooms of ambitious young men from the factories. Without conscious formulation of the doctrine that the schools of the community should teach whatever the business of the community demands in a large way, we have accepted it in our practice.

Because of recognition of the principle that every man's vocation, as well as his location, puts limitations upon his life and thought, we have always deemed it necessary to teach pupils many things in history, literature, and language, largely for the purpose of enabling them to understand people far removed from them in time or territory. We know the moral value of the suggestion, "Put yourself in his place;" but we have not fully learned that due appreciation of the dignity of manual labor, and its possible intelligence and self-respect cannot be gained without doing this in some practical way. No amount of reading and study will do this for most of us as efficiently as a little experience with the life work of the class we would understand. How else can we account for the general attitude of the public toward manual and industrial education? We hear enough of its virtue, we read enough of the value of its contribution to the efficiency of the social and political life. But so long as only the neglected negro, the abused Indian, and the inmates of our reformatories and penitentiaries are made its chief beneficiaries, how can we avoid the conclusion that it is not truly understood?

Now no one will deny that it is highly important that the city boy, who as a man is to live in the city, help form public opinion of the city, and express that in his vote, should have a sympathetic interest in the work of the farmer, the horticulturist, and the gardener. The good of the commonwealth demands it. In my own state the gravest hindrance to progress in helpful legislation for both city and country is mutual misunderstanding of the city view-point and the country view-point. We in the city think the shortcoming and the duty of our farmer fellow-citizen are manifest; but is it not our duty to give our children, not only tuition, but industrial experience that will make it easier for them to co-operate more intelligently and sympathetically with the great agricultural class?

And not alone in manufacturing states like Connecticut, but thruout the Union, the city children need this opportunity to gain at least an elementary acquaintance with the life-endeavor of the great farming class. The best place to train our city boys and girls to this open-eyed and open-hearted co-operation with the millions of their farmer fellow-citizens is in the school garden. The school garden as an institution has, of course, large value as a nature-study laboratory. It may also prove a solution of the vexed problem lying between too many hours in school and too many hours on the street. But its chief value lies in the fact that it gives thru its experience the oral and intellectual sympathy which I have urged is so needed in the civic and political life.

It may be urged that the garden on any adequate scale is not available

in the city. It is not and will not be in the city on the day in which we do not insist on the minimum land interests of children. No man would undertake to rear a score of good Kentucky colts without ample grounds in which they might get their play and their training. To limit these would be to insure failure with the noblest quadruped the world has produced. But dozens of communities are essaying to rear a thousand American boys and train them on a school site but little larger than the building—a school site covered with a brick house, a concrete walk, and the grave of man-making play, above which rises the mournful epitaph: "Keep off the grass." Have we not reached the time when we know that blooming girls and bouncing boys are worth more than springing grass and budding bush? Whenever and wherever the physical rights of our youth are properly understood by the managers of our schools, we can trust the solution of the land question to the American father, whose prayer today is still that of the Grecian hero before the walls of Troy: "May this, my son, be greater than his father."

Again, let me illustrate by the example with which I came to be most familiar, and which involved all the type difficulties besetting the development of a city school garden. The Wadsworth Street School—the central school of the system for which I am responsible—is situated in the heart of a thickly populated district of our city. To it 1800 boys and girls went daily. The unoccupied portions of the site were barely adequate to the play purposes of the school. The proper appeal to the school committee in the name of the open-air rights of the children resulted in the purchase of the needed land contiguous to the school site. All was uninclosed, and to the committee it seemed desirable to keep open to the public certain walks thru the property by which thousands of citizens daily traveled to and from their homes. The land secured was enough to furnish garden opportunity for from 300 to 400 children in one year. It seemed desirable, then, to give the garden opportunity to the children of the youngest grades. The first year the gardens were given up exclusively to the children of six kindergartens, under the leadership of an enthusiastic kindergarten supervisor of limitless industry. Nearly all of the kindergartners and the great mass of their children caught the spirit of the work, and the gardens were a great success. The boys and girls of the neighborhood, without any invitation, took upon themselves, out of school hours and during vacation, the duty of protecting from trespassers and marauders. Remember the tract was unfenced and that from 5 P. M. to 6 A. M. no teacher or school official, not even a janitor, was on the premises. The morals of young and old in the neighborhood were equal to withstanding all, or nearly all, temptation. Remember too, that there were scores of children living within a few blocks of this garden who were pupils in private schools and had possibly never attended public schools. Bear in mind, further, that there was no special police protection given to this block more than to any others in the vicinity. When the watermelons approached maturity, and before the frost was on the pumpkins, the watering

of some juvenile mouths and the longing for Jack-o'-lanterns became too powerful, and we lost a good portion of these two crops. Otherwise flowers and vegetables were practically unmolested.

The next season four first primary grades were added to the garden squad. Their teachers brought added enthusiasm, energy, and thoughtful consideration to the managing and directing forces. We were fortunate in having in these departments teachers able to take up new problems intelligently, and ready to follow them up persistently. The gardens were now a pronounced success. The work was practically all done by the children and their teachers. The highly efficient teacher or kindergartner could be picked out as readily in the garden as in the school. We had answered the question: "Are the school hours too long for the primary children?" Too long always for the wrong kind of work; never too long in the school that has the intelligence to recognize, the courage to stand for, and the freedom to serve the true interests of the growing child.

Other cities of varying industrial life and environment may furnish varying specifications in their answer to the question we have discussed. The principles which we have endeavored to enunciate must, however, be followed by all. The best forms of industrial education for the children of any given city must result in the development of power not adequately developed in the traditional curriculum, must train for industrial efficiency in the city, and must give sympathetic understanding and respect for the life-work of the millions in the country.

ART AS RELATED TO MANUAL TRAINING

JAMES EDWIN ADDICOTT, PRINCIPAL OF ISIDORE NEWMAN MANUAL-TRAINING SCHOOL, NEW ORLEANS, LA.

It is my purpose today to make clear two points: first, that art and manual training, as expressed in private, municipal, and national life, are one and inseparable, and consequently should be so presented in the industrial-arts courses for our public schools; second, I shall attempt to show specifically what phases of art and manual training may be correlated naturally and advantageously.

This paper assumes that both art and manual training constitute essential branches in the courses of study of our elementary and secondary schools. The direct question before us is: Are they distinct branches having few points of contact, or are they fundamentally related?

The answer cannot be safely settled by referring to texts on the subject; neither should opinions of successful teachers of the individual subjects be wholly relied upon, unless perchance they aim far beyond the technique and organization of school work. Rather let us look out broadly upon the necessities of the industrial world and feel the pulsing need of American institutional life, if we would answer the question rationally.

To be more specific, it must be admitted that, on the one hand, there may

be a few individualistic artists whose work is so highly specialized as to go wholly unrelated to structural elements; and, on the other hand, there may be mechanics whose work does not and need not partake of any artistic feeling. It seems to me, however, that such specialists have no more right to expect that a technical preparation for their callings be given in the elementary schools than the lawyer has to expect a training sufficient to plead a case of criminality in the courts, or the surgeon that all pupils be qualified to treat a case of appendicitis, or the clergyman to request that each child be able to expound the doctrine of the Trinity.

In the past the manual-training movement in this country emphasized highly specialized technical and accuracy features as essentials of a preparation for a few specific forms of handicraft. Likewise much of art in the schools has been and still is a series of drawings arranged in such sequence as eventually after many years of effort to prepare the pupil for some specific phase of so-called "refined art." The teacher who hopes to guide educational thought today must feel the relation of his specific branch to the world's work. Admitting the narrow specializing aims of art and manual training in the past, it is but just to say that they approached the educational ideal as closely as other school branches: for we not only claimed, and could prove by the theories of the pioneer psychologists, that manual training and art trained all the faculties at one sweep, but we invented some new, artistic, and mechanical faculties which were developed simultaneously with the commonly accepted list.

With such narrow and undemocratic ideals, and with such an inadequate theory of the aim of education, it was impossible fully to comprehend the fundamental relations which naturally combined the arts and crafts into a broad and unifying educational movement.

Today the educational ideal has shifted. We look not so much to text-books, not to the teacher, not to the rich heritage of the past; rather, we look to society, and to the great industrial and commercial enterprises, if we would know just what is best to teach.

The thoughts contained in texts, the ideas of the pedagog, and the ideals of past generations are to be accepted only as they serve to fulfill society's present plans for physical, intellectual, and religious attainments and needs.

From this broad social standpoint let us first consider the arts, then the crafts, and then their union as expressed in private and public needs; and lastly the relations of the two in school as a preparation for, and as a participation in, this private and public life.

In the past there has been an almost superstitious reverence for the highly specialized talents of the artist. Someone has described the artist as "heaven-taught;" for it is he that has led us to see and appreciate the beauties of ocean, of mountain, and of God's grandest works.

When the artist really does lead us thru his work to a nearer view, and a higher appreciation of the exquisite harmonies and beauties of nature, his work may indeed be styled heaven-taught, and even heavenly; and he may be given

credit for living up to his highest religious and educational ideals. Too often however, we see the painter of the picture glorified, rather than the works of the Creator which inspired the artist and thus made the painting possible. We have a suggestion here of the true nature and mission of art. Art fulfills its highest mission only when it leads us to a higher appreciation of the beauties of nature, whether they be inanimate, animate, or human. A taste for things beautiful in nature, a refined and delicate feeling of pleasure in the sunset, the woods, the mountain streams, and a sympathy for nature's creatures, are among the highest ideals of art instruction.

When fine art becomes separated from all other arts, when fine art ceases to be an integral part of the thoughts, actions, and inner being of the individual, its grace, charm, and effectiveness are lost.

Instruction in fine art is the creation of an atmosphere in which the student breathes, moves, and performs every detail of his life's work. Fine arts should affect our taste for nature, for literature, for music, for high companionship, and, in fact, for everything lovely and holy.

Art is not a subject to be isolated from all other subjects, and then subdivided into its various parts for special study and arrangement; but rather a charming appreciation of all things beautiful, at all times and in all places. Consider for a moment the broad influence of art in the modern home. Notice the simplicity of lines in the woodwork and furniture; notice the color scheme of carpets, rugs, tapestry, wall-paper, and decorations. While there are many things in one room, the harmonious blending of colors and of simple decorations impresses one with a unity and simplicity that are exquisitely pleasurable. The darker tones of the floor gradually lighten to the soft tints of the ceiling, producing a quietude in the individual similar to that felt when nature supplies the restful dark-green beneath, the woods and mountains in the foreground, and the light-blue sky above.

An attempt to separate clearly the arts from the crafts in such a home would mean annihilation to both. Without the delicate artistic touches to the structural and ornamental elements, there would be little need or appreciation for much of the craftsman's work. Reciprocally, without the constructions of manufacturer or craftsman, how and where may the artist express his feelings or display his talents?

The union of arts and crafts is displayed in every department of a modern home; from the drawing-room to the kitchen, the principles of harmony, simplicity, and beauty are expressed by the correlated work of the artist and the artisan.

This correlation is strikingly manifested also in private, municipal, and national enterprises, tho what has been accomplished is a very small part of what is to be. Elaborate preparations are on foot in many of our cities to adopt a style of architecture adapted to the climate and most fitting the natural environment; also to give such cities an arrangement of public buildings that will add architectural beauty, and at the same time suit the convenience of the

As a means of natural unfolding and self-expression, we find both art and manual training to be safe and reliable agents.

The correlation of these two subjects is the great need of each. This cannot be done by discussing the relative merits of each, nor by emphasizing the strong characteristic features of one for the purpose of improving the other. What we must do is to seek common ground, and work together along the line of least resistance for common ideals. We have already shown that there are certain fields of educational work and of industrial enterprises and of practical everyday affairs which look to both art and mechanical skill for their highest and richest realization of success. Speaking broadly, we find that even remote and apparently unrelated branches, such as music, poetry, and literature, are dependent in no small way upon the fine arts for a full and complete interpretation; the mechanical element, likewise, is necessary for any expression of cadence and rhythm in either poetry or music.

It is in the field of industrial arts that hand-skill and fine arts are obviously related and interdependent. In the preparation and serving of foods, in the planning and making of clothing, in the construction of homes, business houses, means of transportation, and in the various other conveniences serving the æsthetic and practical needs of man, we find the common ground referred to—the workable field for both fine arts and manual training.

In considering the various subtopics coming under the general heading of industrial arts, we find some lines, such as pottery, basketry, and metal-work, lending themselves most naturally to the artistic designer; there are other lines, such as textiles, cardboard, and wood-work, offering many limitations; while still other lines, such as joinery and machine-shop work, admit of very little art expression.

Let us now consider what phases of art are best suited to manual-training courses. Both applied design and art interpretation may well serve the manual-training teacher; for the former deals with the size, form, and color of construction, and the latter allows a universal application of art principles.

It is evident that other important lines of art, such as a study of pictures, and the life and works of artists, of historical and inspirational masterpieces, as well as the production of pure or modified representation, are less intimately related to structural work.

That branch of art known as design seems, then, to be most vitally related to hand-work; indeed, it is an essential part of that work; for it deals not only with decoration, but also with construction and arrangement of parts.

By design I mean the "conception and expression of form and color ideas, including all kinds of construction, arrangement, and decoration." The main purposes of design are to secure unity, simplicity, and beauty; the specific principles of balance, rhythm, harmony, variation, etc., are also to be ever kept in mind.

Every design must be influenced by, and must conform to, the ideas of *use* to which the thing is to be put, to the essential structure, to the materials of which

it is to be made, and to its surroundings. It is in these last ideas that the artist finds his greatest difficulties when trying to assist the manual training work. The art teacher who has never made a basket can hardly be expected to direct the work in designing baskets. The same difficulites arise in designing for sewing, bent-iron work, cabinet-making, or any other line of hand-work.

The question naturally arises: "Where may the teacher be found who is at once artist and mechanic?" One rarely finds an artist with the accurate training of a mechanic; the artist rather deplores accuracy as being destructive to art. On the other hand, how few technological students find real pleasure in fine arts; they rather look upon artists as visionary persons who have a superstitious reverence for beautiful forms and color.

Occasionally we find an artist who sees how art may be applied to the work of securing and making food, clothing, and shelter in such a way as to administer to the æsthetic feelings as well as to the material comforts of man.

Occasionally, too, we see a manual-training teacher taking fine-arts courses, and getting the appreciation and spirit of art, perhaps as a controlling influence over all he sees and hears and thinks.

While we are expressing our desires and ideals concerning the simultaneous teaching of hand-work and art, the fact still remains that the artist-artisan who is at once an artisan-artist is rarer than the four-leafed clover—I might say after the frost.

What education needs today is men and women who are well balanced in these two related subjects, who appreciate both, and who can teach both without under- or over-estimating either.

The teacher of design should fully understand the limitations of materials to be used; such knowledge is impossible to one who has not had much experience in the manipulation of substances involved in manual-training courses. The teacher of hand-work has the limitations of material well defined; he usually has his ideas of design well defined also—too well in fact, for the straight edge and compasses are still used at the expense of free-hand designs, and consequently the æsthetic element is not given its rightful place.

It is practically impossible for the art teacher and the manual-training teacher fully to agree upon the design and structure of a given project, and this lack of agreement indicates the desirability of securing a teacher who is well balanced in designing and construction. Such combined qualifications, as has been pointed out before, are rarely found in one teacher. And this indicates the crux of the whole matter. When our training schools and colleges can send out well-balanced teachers of the arts and crafts, teachers who understand both, and teachers who love to teach both, the question before us now will not be a difficult one to solve. This does not mean that teachers without training in each line should be forced to teach both; for if the teacher is an artist, it is futile to try to get an exact balance of the two. If the teacher is a mechanic, the same is true. Let the teacher teach that which he loves,

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