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THE CANADA  
EDUCATIONAL MONTHLY  
AND SCHOOL MAGAZINE.

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AUGUST-SEPTEMBER, 1886.

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THE ONTARIO COLLEGE OF PRECEPTORS.\*

BY GEORGE DICKSON, M.A., PRINCIPAL UPPER CANADA COLLEGE.

[Special Revision for MONTHLY.]

THE consideration of the question of a grand union of all teachers of the Province into one Society, possessing the power of admitting members and of enacting by-laws for the regulation of all matters concerning the teaching profession, is now introduced for your consideration under the title of a "College of Preceptors." The designation of the proposed Union may first claim our notice; and on this point it may be said that as there is in Ontario a Law Society, and Societies formed among the other professions of the Province, each conserving and advancing its own special interests, the title of "The College of Preceptors for Ontario" will, perhaps, be appropriate, considering the objects we have in view. Some suggested the title, an "Education Society" for our pro-

jected union; the aptness of the former, and the vagueness of the latter, are obvious, and will, doubtless, decide the matter as to the name by which the union shall be known. As an art, education is very old; old, I presume, as the human race; but as a science it is among the last born, scarcely yet named in the English language; and although it concerns itself with every other science, and is surpassed by none in its promise of ever-widening benefit to mankind, the followers of the art scarcely take rank as a recognized profession. The State in its desire to provide an education for youth takes charge of the teacher as well as of the school. His position is that of a sort of civil servant, "cribbed and confined" by regulations and by-laws; bound to serve, not one, but many masters; scarcely consulted in matters pertaining to his work; his part is to carry out a

\* A Paper read before the Ontario Teachers' Association, at Toronto, on the 11th of August, 1886.

prescribed curriculum in a prescribed way; he is left limited room for development in his calling, and little opportunity for making his individuality felt.

It is the aim of the contemplated union to provide a remedy for these defects, and, it is fitting that this movement, which has been long talked of and discussed, should be taken up by the Ontario Teachers' Association—the only organization of the kind amongst us that is provincial in its character. We must have, as a representative body, a brotherhood of teachers; our aims and sympathies are in harmony; there is, or should be, a feeling of loyalty to the profession, and a professional *esprit de corps*, which is above mere personal matters. I feel, therefore, that whatever conclusion this Association comes to in regard to this very important question, it will meet with the hearty approval of all the teachers of the Province.

We need more organization and less isolation; we should know each other better than we do; we want a fuller recognition of the necessity of good professional training, and a more adequate appreciation of our work on the part of the public. I have no doubt that these objects may be pursued successfully, because the whole complexion and temper of the times are favourable to their present discussion. Not only is there a wide interest taken generally in education, but there is abroad a spirit of robust and intelligent criticism, not, of course, perfectly instructed, nor always based on profound study, but on the whole intelligent criticism; and it is assuredly a sign of a healthy condition when our work attracts such criticism.

Any effort at forming a union having in view merely our pecuniary gain will certainly fail, as flavouring too much of trade unionism, and placing us in a position of antagonism

to the other professions, and to a very important and influential class of sympathizers in our national system of education. There are defects in our educational system which our scheme should seek to remedy; if we cannot show that the projected scheme will benefit the public as well as the teaching profession, we need not hope to succeed. We want a fuller recognition as a profession; teaching is something more than a trade—a means of getting money; it is, or should be, a real vocation or mission—a something for which a man has certain talents to be turned to right account; it is not only a service but a ministry. It requires a professional training—the direct training in the art of teaching, and an indirect training which comes from our own devotion to thought and research into truth. We claim for those entering the teaching profession a professional training secured by the influence of spirit—the power of full conviction and of moral influence—and the influence of law.

The first and most important essential in teachers themselves is a conviction of duty—a something like enthusiasm for the work. The public can stimulate these influences for us; they can look upon our work in the same light, and from a point of view as high as that from which we ourselves regard it; but unless we have these higher influences, unless there is a feeling of duty, and that enthusiasm in the profession which is begotten of self-respect, as well as an earnest regard for the good name of every member of the profession; and unless these are taken for granted by the public, we will never maintain the teaching profession in its true and fully accredited position.

But there is a decided function of law in this matter—its directing and stimulating function. The public have surely as good a right to be secured

by proper qualification in this as in the medical or legal professions. So far as the patrons of the schools under government control are concerned, the protection is ample; but what of other schools? The injury done by an inexperienced or ill-trained teacher is infinitely greater than a mistake made in the other professions. The child is committed to the teacher's hands in the very morning of life, when the character, still more than the young limbs, is, so to speak, in the gristle. Both limbs and character have acquired some of their proper consistency and powers of resistance; but how much of the intellectual and moral frame are not the first impress and shaping given at school? Is this a matter to be disregarded? Mistakes that lie on the surface, and are easily seen, are soon remedied, and the best means are employed to prevent their recurrence; but mistakes that affect the proper care and culture of the intellect and character—"that unspeakable mystery on earth, a thinking, reasoning, discoursing, immortal creature,"—are so subtle and the consequences so remote that they often pass unheeded. No one now questions the value of the professional training of teachers, or the right of the State to impose a rigorous supervision of the teacher's work; but this supervision does not go far enough. Any scheme proposed will but half meet the necessities of the case that does not concern itself with teachers of all grades, and with teachers not at present under the control of the Department of Education; our organization must extend from the highest rung in the educational ladder to the lowest—from the highest chair in the university system to the humblest private school in the land. The inefficient teacher should not be permitted to practise privately in educational work any more than the sciolist should in medicine or in law. Teach-

ing is not a mere piece of job-work to which any one may turn his hand, but a professional calling which requires knowledge, judgment, and experience.

Holding these views with regard to the value and character of the teacher's work, and of the necessity for some sort of organization, a review of the operations of the College of Preceptors, London, England, will, I dare say, aid us in working out the problem before us. The English College of Preceptors was established in 1846, and incorporated by royal charter in the year 1849. It was founded, we are told, "for the purpose of promoting sound learning and of advancing the interests of education, especially among the middle classes, by affording facilities to the teacher for acquiring a knowledge of his profession, and by providing for the periodical sessions of a competent Board of Examiners, to ascertain and give certificates of the acquirements, and fitness for their office, of persons engaged or desiring to be engaged in the education of youth."

With these aims in view the charter empowered the College to hold examinations of teachers and schools, and to grant diplomas and certificates to such persons as pass these examinations satisfactorily.

To effect these objects, two plans of examination were established:—

1st. The examination of *teachers*, to ascertain their qualification and fitness to take part in the work of instruction.

2nd. The examination of *pupils*, to test their progress, and to afford at once to the teacher and to the pupil a satisfactory criterion of the value of the instruction received.

It is a distinctive feature of these examinations that in all cases the *Theory and Practice of Education* is an obligatory subject for each grade.

The diplomas granted by the College to teachers are of *three* grades, viz.: *Associate, Licentiate, Fellow.*

"The pupils' examinations were established in 1854—four years before the institution of the University Local Examinations, and two years before those instituted by the Society of Arts, both of which may justly be regarded as more or less the fruit of the efforts and example of the College of Preceptors in their efforts to improve the education of the middle classes. These examinations have been carried on half-yearly since that time, with increasing success; during the past year the number of candidates examined for certificates amounted to more than 14,000. Visiting examiners were appointed by the College for the inspection and examination of public and private schools. About 3,500 schools, of both classes, scattered over the country, are now brought under the influence of the College examination."

I may here add that the higher certificates awarded by the College at the half-yearly examinations of pupils are recognized by Her Majesty's judges, and by the General Medical Council, as guarantees of a good general education; the holders of them who may intend to enter the legal and medical professions are thus exempted from the necessity of submitting to the Preliminary Literary Examinations held by the Incorporated Law Society, and by the various medical corporations of the United Kingdom. All the College certificates above the third are also recognized by the Royal Veterinary College and the Pharmaceutical Society of Great Britain. The examinations, both of teachers and pupils, it may be remarked, are open to both sexes.

"The total number examined annually by the College at the various examinations that have been men-

tioned, and the pupils examined at their own schools by visiting examiners, is over 18,000—a number which, it may be observed, greatly exceeds that of the candidates who present themselves annually before any other examining body especially concerned with the improvement of the education of the middle classes."

The movement which resulted in the establishment of the College of Preceptors originated at Brighton, as I have said, in 1846; it spread rapidly, and within a year after its organization there were over 1,000 members. Unfortunately, in regard to membership, as a correspondent informs me, the very error for many years was committed which the College was founded to combat. "The promoters intended to include among the first members all persons of respectability, both male and female, who paid a yearly subscription of one guinea. But they also intended, at no distant date (a date not assigned), to subject all candidates for membership to examination. Amid the pressure of other business, and of crippled resources, the latter intention was, however, lost sight of, and it would seem also that there had been some laxity in the granting of certificates. The consequence was that A.C.P., L.C.P., and F.C.P. became involved in a common depreciation." It must be understood, however, that the College, in its documents, had always drawn a clear distinction between examined and unexamined members—a distinction which the general public could not be expected to bear in mind, or even to apprehend. The investigation of the Schools' Enquiry Commission, together with the action of various learned bodies, for stricter conditions of membership, drew the attention of the more active members of the College to the necessity of reform, and

since 1870 no one was admitted who did not comply with the following requirements:—

I. "All persons, not being under eighteen years of age, who have passed the examinations hereafter specified, or such other examination as the council shall from time to time appoint or recognize, are admissible as members of the College:

"(a) Matriculation and all higher examinations in any University in Great Britain, Ireland, or the Colonies;

"(b) Examinations for diplomas at foreign Universities.

"(c) Foreign State examinations for licenses to teach.

"(d) The Senior Local Examinations held by the Universities of Great Britain.

"(e) The examinations for first-class certificates of the College of Preceptors.

"(f) The examinations held by the Committee of Council on Education for government certificates.

"II. Candidates who shall not be able to produce certificates of having passed one or other of the above mentioned examinations will be required to pass an examination in all subjects required for the diploma of Associate, excepting the 'Theory and Practice of Education.'"

The condition of the College today, I am informed, is healthful and hopeful; the strictness of the regulations has not diminished the number of applicants, and the public now have the fullest confidence in the diplomas of the College.

In 1873 the College instituted a professorship of the "Science and Art of Education" (the first established in England) as a special subject of instruction. The late Joseph Payne was appointed to the chair; he was succeeded by Rev. R. H. Quick, M.A., author of "Essays on Educational Reform," a professional treatise which is well known to you. Mr.

Meiklejohn, who was subsequently appointed to the chair of Education in the University of St. Andrews, Scotland, and Mr. Croom Robertson, of London University, have also filled this chair.

It may be of interest to refer for a moment to some details which, in view of our projected scheme, it will be profitable briefly to notice. The annual subscription to the College is *one guinea*. All persons engaged in education are admissible as members, subject to election by the council; but all candidates are required either to give evidence of having passed an examination satisfactory to the council before some recognized examining body, or to pass an examination at the College.

The officers of the College are practical teachers in all grades of schools, and university professors. The governing body is a council of forty-eight members, elected by the Fellows. This council elects its officers—a President, and three Vice-Presidents, a Dean, a Treasurer, a Secretary, and a Solicitor.

The sources of income for carrying on the work are:—

(1) An annual membership fee of one guinea.

(2) An examination fee of one guinea.

(3) Fees for issuing certificates and diplomas:

(a) Associate, one guinea.

(b) Licentiate, two guineas.

(c) Fellow, five guineas.

The legal registration of teachers, I learn from an official communication, has long been advocated by the College. A proposal for a *Scholastic Registration Act*, analogous in its provisions to the Medical Registration Act, was brought before the public some time ago, and it continues to engage the attention of the council as a much needed reform, and a first step towards making teaching a dis-

tinct and fully recognized profession. The educational systems of Britain are so complex, and the interests of the schools and masters so varied, that the passing of a Registration Act seems almost impossible of attainment. Notwithstanding the difficulties in the way, however, every succeeding year finds the teachers nearer their object; they are brought more together, and feel the necessity of hearty co-operation in securing their rights.

These extracts may assist us in devising some analogous scheme applicable to our own wants. In Ontario the teachers' interests are more in harmony, and we have an educational system flexible enough to adapt itself to our necessities. If we begin this work in a generous spirit, there can be no doubt of the ultimate success of our scheme. I feel that we deserve to succeed, and to deserve success will be to achieve it.

Now we come to the consideration of our projected

#### COLLEGE OF PRECEPTORS.

I cannot enter as fully as I would like into the details of the scheme I have in view without exceeding the limits of the present occasion. Indeed, it would not be well to do more, in the initiatory stages of the movement, than to suggest the foundation upon which to build.

I. ITS AIMS, broadly stated, should be to promote sound learning and to advance the interests of education by admitting to the teaching profession only those who are fitted for the work, to improve the position of the profession, and to protect the public from incompetent teachers.

II. THE MEMBERS.—For one year after the incorporation of the Society it is proposed to admit *all* persons actually engaged in teaching, whether in proprietary or public institutions, on payment of a registration fee. The

teachers' registering would be subject to the conditions now affecting their work, except that an annual membership fee would have to be paid by each teacher to keep his or her name on the register.

It is proposed that after the organization and incorporation of the Society, no one will be admitted without passing the examination prescribed by the Society. The members might be classified as follows:

(1) *Associates*: Corresponding to third class teachers. The examination for the standing of Associates should correspond to the matriculation or the preliminary examination for any of the professions.

(2) *Licentiates*: Corresponding to second class teachers.

(3) *Fellows*: Corresponding to first class teachers and to High School masters.

III. THE GOVERNMENT OF THE SOCIETY should be vested in a council elected by the Fellows and Licentiates.

IV. ITS POWERS. The Society should have power to manage its own affairs, to enact by-laws for the admission and government of its members, to impose fines and penalties for the violation or non-fulfilment of duties prescribed, and to settle all matters of dispute arising among teachers.

#### V. CERTIFICATES AND DIPLOMAS.

(1) *Certificate of Associate*. A membership certificate entitling the holder to the standing of

(a) Third class teachers, as at present recognized.

(b) Private school teachers, in their present status.

(2) *Licentiate*. A certificate authorizing the holder to teach, subject to the conditions affecting second class certificates.

(3) *Fellows*. A diploma issued to first class teachers of all grades and to High School masters.

VI. PENALTIES. For the efficient

working of the College, penalties similar to those enforced by the College of Physicians and Surgeons, Ontario, should be enacted, say,

- (1) For teaching without a license.
- (2) For non-payment of fees.
- (3) For other violations, such as unprofessional conduct, etc.

#### VII. FEES. (Suggested.)

(1) For admission to the Society and issuing certificates (Associate and Licentiate), \$5.00.

(2) For diplomas, \$10.00.

(3) Annual membership fee, \$2.00 ; or commutation fee for Life membership, \$30.00.

(4) For each examination, \$5.

#### VIII. RELATION OF THE SOCIETY TO TEACHING INSTITUTIONS.

The Society should be an examining and not a teaching body. It should conduct, independently of the Education Department, both the professional and non-professional examinations for all grades of teachers' certificates and diplomas.

As a fair equivalent for the work done by this Teachers' Society the Province should support, in part, the system of Normal and Model Schools now established ; but they should confine their work to methods of teaching, school organization, school discipline, school law, together with such subjects of study as aid in the *practical* working of schools.

The theory of education and the solution of educational problems, should be left to the University in which a Chair of Education should be founded and endowed.

#### IX. ITS RELATION TO THE STATE.

It is analogous to that of the Law Society of Upper Canada, and its parallel points of resemblance may be thus summarized :

The State demands and pays for the proper administration of justice as a matter of public weal ; it also demands, and for the same reason, that only those who are pro-

perly qualified (as determined by examination) shall be entrusted with this work ; but the duty of deciding who are qualified to practise law is left to a Society composed of legal practitioners, who, in their corporate capacity have the power of conducting all examinations of candidates as to their fitness to practice law.

Similarly, the State demands and pays for public education as a contribution to the public wellbeing ; it also demands, and for the same reason, that only those who are properly qualified shall be entrusted with the work of teaching in schools receiving Provincial aid ; and the duty of deciding who are qualified *should* be entrusted to a Society composed of teachers qualified for any position in the public system of education.

The Teachers' Society should hold the same relation to the State and to the Educational Institutions of the Province that the Law Society holds to the State and to the Law Courts of the Province.

The Law Society decides who shall practise law ; the Teachers' Society should decide who shall practise teaching. The right of teachers to control the admission of members to the teaching profession rests on the same grounds as that of the Law Society to the control of its membership.

The Law Society demands that all positions requiring a knowledge of law shall be held by its members ; in like manner the Teachers' Society should demand that all positions requiring a practical knowledge of schools and school teaching, should be held by members of the teaching profession, and by them alone.

X. Besides these practical matters this Society would be competent to deal with the question of *Life Insurance, Sustentation Fund, Superannuation allowance, Teachers' Bureau*, and all that concerns teachers and the teaching profession generally.



There are many advantages which the scheme suggests as likely to follow its adoption, and a few of these may here be mentioned:—

1. *To the Public:*

(a) Fuller protection from incompetent teachers.

(b) Better work in the schools.

2. *To the Cause of Education:*

(a) As the formation of the Teachers' Society will certainly give more permanency to the profession it will induce a larger number of able teachers to remain in the work.

(b) The danger of misdirected energy will be lessened.

3. *To the Teacher:*

(a) He will obviously have a better social position, a fuller recognition as a member of an organized profession.

(b) He will have the support and encouragement that a society formed for mutual protection and benefit confers.

(c) He will have a voice in the government of the Society that regulates his work, and which admits to membership in the profession; unprofessional competition for positions in our school system may thus be dealt with by teachers themselves.

(d) The defects of our system of examinations can be corrected by this organization without appealing to political bureaucracy for redress.

Having now laid this matter thus fully and in its varied aspects before you, some questions will likely arise in your minds as to the relations of the projected Society to the chief executive officer of the Department of Education. The matter is a deli-

cate one, particularly as I discuss it without having had the advantage of conferring first with the Honourable the Minister; but the benefits of the scheme are so obvious that I venture to think they will commend themselves, not only to you and to the profession at large, but to one who, in the person of the present Minister of Education, happily combines, with a thorough and practical knowledge of all branches of school work, an enthusiastic interest in the profession of teaching, and a laudable regard for the teacher's status and welfare. It may be taken for granted that the work of the college would relieve the Minister of many duties that are of necessity irksome and sometimes embarrassing. What these are, in the political connections of the Minister's functions and office, I need not refer to; they will occur to the minds of all of you.

The organization and operation of a Society, such as is here outlined will not lessen, in the slightest degree, the necessity for an executive head of the Department of Education. It will be necessary, indeed, that the details of the whole scheme should receive his concurrence, and that the aims and objects of the Society should meet with his full and cordial approval. It would be advantageous, moreover, were he to become an *ex officio* member of the College with special powers. With his sanction and co-operation, and the hearty endorsement of this meeting and of the profession at large, our undertaking should not fail of immediate and assured success.

CANADIAN LONGEVITY.—That the climate of Canada conduces to longevity is proven by the list of the veterans of the war of 1812-15 who still survive. The annual report of the Minister of Militia tells us that there are at present 62 of these warriors who are 90 years of age; 31, 91 years old; 36, 92

years; 17, 93 years; 23, 94 years; 15, 95 years; 5, 96 years; 6, 97 years; 8, 98 years; 4, 99 years; 2, 100 years, and 1, 101 years old. Facts like these would make more effective reading for immigration purposes than incorrect statements of the wages earned by mechanics and labourers.

## EDUCATION OF TEACHERS.

BY PROFESSOR M. MACVICAR, PH.D., LL.D.

## PERIOD OF CHILDHOOD.

**T**HIS period commences about the seventh year of the child's life, and ends between the twelfth and sixteenth. Surroundings, climate, health and other causes produce an unnaturally rapid development of the body and mind, and hence children pass from the second to the third period at different times between the ages named. An early change from the second to the third period is not desirable. The longer the spirit and simplicity of childhood continues unimpaired by a vigorous activity of body and mind, the greater the promise of a strong and vigorous manhood and womanhood.

The following propositions suggest questions demanding the attention of the parent and teacher during this period:

15. *The brain, sensory organs and mechanical organs have reached a degree of maturity which demands a wider range of sports or physical exercises than during infancy.*

(a) An increase of physical energy is a necessary product of the process of healthful growth. This energy during childhood increases more rapidly than it can be used in the ordinary activity of the body, hence the demand for an outlet. Play or sport is the only natural outlet. Work can in no way be made a substitute. This is evident from the very nature of play and work. In play the primary end sought is the pleasure or enjoyment present in the very acts performed, while in work the primary end sought is always a useful result

outside of the acts performed. In work the present experience may be pleasant or painful. The activity is continued not as in play because of present physical enjoyment, but because of the influence of some outside power, and hence is not the natural demand of the growing organism. Then, again, surplus physical energy is generated in every organ of the body; but work, from the very nature of the case, affords an outlet only for the energy generated in certain mechanical organs, such as the foot, the hand, etc., and hence in the formative condition of the body tends, unless carefully guarded, to destroy the symmetrical development of its organs.

(b) The natural discharge of surplus physical energy is always accompanied by pleasant pleasurable sensations. This discharge takes place only through the exercise of the organs in which the energy is generated; hence the necessity of the endless variety of activity characteristic of the child. He runs, walks, jumps, rolls, tumbles, twists the body into all possible shapes, talks, laughs, shouts, and makes all kinds of noises; in short, if left to himself and surrounded by proper conditions, he discharges surplus physical energy through every pore of the body. This is the necessary accompaniment of a healthful physical growth. Hence, any system of education which does not make proper provision for the natural discharge of physical energy can never build up strong and symmetrical men and women.

(c) The nature and character of

sports change with the growth of the body and mind. During infancy and a large portion of childhood, the pleasurable sensations accompanying the discharge of physical energy is almost the child's sole reason for engaging in sports. Hence the same sport or the same round of movements continues to be repeated consecutively until, through the exhaustion of surplus energy, this pleasurable sensation ceases to be produced. It only requires, however, a short time to restore this exhausted energy; hence the child returns again to the same sport with as much zest as before. The fact that the physical energy generated in the various organs of the child's body is quickly exhausted and as quickly restored, is the reason of the peculiar delight which he takes in a rapid succession of different sports which call into exercise constantly new combinations of his organs. In this connection it should be observed that, as the mental powers of the child commence to control his action—as he commences to feel an ambition to excel—his sports become more complex and continuous, and less of the nature of pure, spontaneous, physical exercise, and less productive of real good to the child. Indeed, purely ambitious considerations may control to such an extent as to convert what may be called a sport into an exhaustive and injurious work.

(d) No physical exercises are productive of such healthful results as those which are spontaneous and free from all constraint. Hence, plays and sports conducted in a well-regulated playground rank first among physical exercises. "Order in confusion," and proper regard to the rights of the weak and the strong, should be the only requirements of such a playground. No scheme of regulating the sports should be adopted that would deprive the children of the delightful experiences consequent

only upon a free and spontaneous activity of the organs of the body. It is very clear, however, that every school is not, and perhaps cannot be, provided with proper accommodations for outdoor sports; hence resort must be had to calisthenic exercises as the next best thing that can be done. For disciplinary purposes, and to promote graceful movements of the body and the development of special organs, calisthenic exercises have a decided advantage over the other. Yet they fail to infuse into the body and mind that vitalizing and healthful power which results from free exercise in the open air; hence, calisthenics should always have, where either is possible, the second place in the physical exercises connected with a school.

16. *The child, during this period, associates indiscriminately with other children of his own age, and is easily affected by their language, actions and habits.*

(a) The distinction of sex has but slight influence in determining the child's associates during this period. The same natural impulses regulate the general conduct of both boys and girls. The natural promptings and attractions of their physical natures are the same. Hence they enjoy, unless warped by conditions imposed by the parents, the same plays and sports. These plays and sports bring to both the same intense pleasure. This state of things should not be disturbed by artificial requirements imposed in obedience to the supposed demands of society. In this period of child-life boys and girls should be allowed the same freedom of outdoor sports, and should, under proper restrictions, mingle freely with each other.

(b) If left to his own natural impulses, the influence of occupation, position, or rank in life, and so on, is almost entirely disregarded by the

child in choosing his associates. Pleasure or enjoyment is the chief thing sought in his companions, and this pleasure comes to him during this period chiefly through the exercise of his physical organs. Hence he selects as his associates, without much regard to anything else, those who can minister most freely to this exercise. If he enjoys special field sports, his companions will be such as can contribute most to this enjoyment. It matters little what they are socially or morally; the boys from the lowest stratum of society are valued as companions in those field sports just as much as those from a higher plane. This natural forgetfulness of all social distinctions, accompanied with the strong tendency to form habits, is one of the most powerful elements for good or evil in child-nature. Properly directed, it will build up a broad and noble manhood, which will always exercise sympathy for all classes and conditions of men. But if left unguided, it usually, as society is now constituted, leads the child into wrong courses of action, and fixes upon him habits which affect injuriously his whole life. Hence the importance upon the part of parents and teachers of a careful study of this phase of child-life. Hence, also, the importance of the most earnest effort to surround the child with such conditions as will rightly guide him in his necessary associations with other children, and in the choice of his companions.

17. *During this period the activity of the senses continues, and is accompanied by the development of reflection, and hence of the simplest form of reasoning and of search for the causes of material and immaterial phenomena.*

(a) The child touches, tastes, smells, and handles everything that comes within his reach, and he cannot do otherwise if he follows the impulses of his nature. These natural impulses should not be put under chains. The

child should be left free, and indeed encouraged to apply all his senses in examining into the nature of his surroundings. To do otherwise is to crush out of him what God designed as one of the most important elements of a strong intellectual and moral nature. There is but one true course in this matter. The senses should be gratified, and their exercises guided in such a manner as to form the power and habit of making accurate observations. This cannot be done either by leaving the child free to use all his senses indiscriminately as chance may direct, or by cramping him at once into a scientific mould where the most orderly use is made of each sense. The power and habit of using the senses accurately is a growth—is the product of a gradual and natural transformation of the inherent sense-hunger in a child into an accurate working force. The simple duty, then, of both parents and teachers is to supply the necessary conditions to produce this transformation.

(b) Reasoning, reflection, and search for the causes of things in their simplest forms commence with the very first dawn of intelligence; but during infancy the imperfect condition of the brain and nervous system, and the strong demand made upon this imperfect organism by the process of growth and by the endless variety of new objects presented to the senses, excludes the possibility of reasoning and reflection proper. During infancy, however, the child usually exhausts the enjoyment afforded by simple sports and by the simple use of his senses upon surrounding objects. Hence, in order to have new enjoyments, he is naturally compelled to form new combinations in his sports, and to seek new objects on which to exercise his senses. This condition of things, therefore, makes a demand for a higher order of reasoning and reflection than was necessary during

infancy. In this connection it should be carefully noted that the process of reasoning and reflection belonging to childhood is of a concrete nature, and pertains to such subjects and principles as can be illustrated or demonstrated objectively. Hence the course of study during childhood should be confined to what is concrete and experimental.

18. *The child lives in the present; his actions are almost entirely the products of present attractions and repulsions, of present simple convictions of right and wrong, or of habits already formed.*

(a) The attractions and repulsions which control the child's actions during infancy and the earlier part of childhood pertain largely to the senses. What gives sentient pleasure or pain usually decides the course of action. Hence the system of rewards and punishments so commonly adopted in controlling the child's will. Intellectual attractions and repulsions gradually rise into prominence. As the child enters the period of youth they have a strong influence upon his actions. His volitions gradually become more the products of reason and forethought. His convictions of right and wrong, however, continue to be largely the products of simple principles wrought into his mind by his parents and teachers during infancy and childhood. When a demand for action is made upon him, these principles rise into consciousness and determine the course to be pursued.

(b) All motives which influence the will are states of consciousness—such as emotions, feelings and perceptions of utility, propriety, right and wrong, and so on—which are present at the time the will is to be exercised. These states of consciousness may be either the products of our immediate present surroundings and hence transitory, or they may be the products of past experience, principles, or habits, which

have been wrought into our nature and remain permanently with us, and which are called into consciousness by present surroundings. In the former case, the course of conduct is literally the creature of present surroundings; in the latter, however, present surroundings have but little to do in determining the course of conduct.

19. *The child's course of conduct in after-life, his character and moral strength, depend very largely upon the method of control adopted by his parents and teachers during infancy and childhood.*

(a) This proposition necessarily follows from the position stated in 18 (b). The boy who has been controlled by present enjoyments supplied by an indulgent parent or teacher, when he passes into less favourable surroundings his conduct becomes strangely changed; the amiable and well-behaved boy in the mother's sitting-room or in the teacher's classroom, becomes all at once unreliable and vicious. This is almost the invariable product of that method of governing children which controls them by simply supplying present gratification.

(b) The position stated in 18 (b) points to another method of control. Present enjoyment should not be ignored, yet it should be made simply a means to an end. While ministering to the child's enjoyment, it is the imperative duty of both parent and teacher to see that true principles of action and correct habits are wrought into his being. These he will carry with him as a permanent possession, and they will determine his course of conduct when he ceases to be under the influence of pleasant surroundings supplied by the kind hand of another.

#### PERIOD OF YOUTH.

This period commences between the ages of twelve and sixteen, and ends

between the ages of twenty and twenty-five. The chief points which demand the special attention of parents and teachers are set forth in the following propositions.

20. *The body at the beginning of this period is in a transition state, and demands special attention in order to prevent mistakes which may result in permanent injury.*

(a) New experiences growing out of physical changes make their appearance at the beginning of this period. These experiences in their nature are exciting and taxing upon the nervous energies. They are also accompanied by a strong natural tendency to sacrifice largely the other vital interests of the body in order that they may be enjoyed. Hence, at this particular stage of development, there is great danger of fatal injury to the body growing out of the violation of simple physiological laws.

(b) A large share of the ruinous practices which prevail during this period is the result of ignorance of the fatal consequences accompanying these practices and of the proper treatment of the body. It is therefore the imperative duty of parents, and in case they fail to do the work, then of teachers, to give, at the proper time and under proper restrictions, such instructions as will make plain the evils to be avoided, and as will impart strength and determination to avoid them. Recourse in this matter should be had to the instructions given upon the subject in standard authorities on physiology and hygiene.

(c) All concede that the condition of the body affects directly the experiences of the mind. When a man is "blue," it is usually safe to conclude that his digestive organs are somewhat out of order. It is no more true that the body affects the mind than that the conditions and states of the mind affect the body and produce in it derangement and ultimately disease.

A good example of this law is found in the effect produced by reading a certain class of books. A large share of the physical tendencies and ailments so common among the youth of to-day arises from this cause. Parents permit or encourage the reading of books which appeal almost entirely to the emotional nature, and hence which influence the feelings and passions, and they in turn react upon the body and induce courses of conduct which bring upon it disease and ruin. Here it should be carefully noted that physical debility or disease as a reaction from the mind is the result of passive, not active, states of mind—is the result of an over-exercise of the feelings, the emotions, the passions, and not of the intellect, the reason, the judgment. By keeping the feelings and the emotions nearly inactive, a boy or girl between the ages of fifteen and twenty-five can perform, without the slightest injury to the body, far more of what may be called pure intellectual work than is now usually performed in any of our public schools.

21. *During this period all the products of the intellectual nature, including the reasoning power, judgment, etc., carry with them the authority of intuitions.*

(a) Sense products absorb largely the attention during infancy and childhood. Accompanying this condition of things a gradual transformation is going on. The mind is becoming more and more interested in simple inferences that follow readily from the sense-perceptions acquired. As a result, at the beginning of the third period, simple processes of reasoning, such as each mind is prepared for, become more intensely absorbing than even sense-products. Facts already acquired are now assuming a new interest, and are again looked over and compared, and conclusions reached which were no part of the original

perceptions. These conclusions are simple and direct, and hence are necessarily as real to the mind as the perceptions themselves. Consequently they carry with them the same positive authority as the perceptions.

(b) As a necessary consequence of the transformation named in (a) a marked characteristic of youth is developed—namely the habit of drawing conclusions from insufficient premises. This habit is the natural result of the direct method of making inferences practised in infancy and childhood. So strong does it become before commencing a course of training where rigid demonstrations are required, that the mind refuses to recognize as necessary the series of steps on which a conclusion is based. The conclusion is perceived and in a certain sense as a conclusion without taking into account in logical order the premises on which it rests. This condition of things is the reason why so many bright children, possessed of marked perceptive powers, strongly dislike the demonstrative sciences. If, however, such children are properly guided by their teachers, they will very soon become intensely interested in the examination of data and premises for the purpose of determining whether the conclusions drawn are legitimate and in accordance with the truth of things.

(c) Other very important characteristics of youth have their origin in the condition of things stated in the above proposition. For example, boys and girls during this period are naturally sceptical, conceited, and positive even to obstinacy. They think they know things just as they are, and that there is little to be known outside of what they have examined. This is a legitimate consequence of the peculiarly new and authoritative nature of their present intellectual products. The child's perceptions of the objective-world are intensely real to him. He

entertains no doubts regarding them. He looks with astonishment at any one who would call in question these perceptions. In this peculiar sense the child may be said to be very sceptical. In this third period a similar condition of things prevails regarding the perceptions of the reasoning powers. These perceptions are also new and authoritative, and contain, to the young mind, just about the whole truth. Hence, as in the case of the child, grave doubts, which assume frequently the form of conceit and obstinacy, are entertained of anything that seems to contradict this authoritative experience. Young men and young women in this good sense are sceptical, conceited, and even obstinate; but this scepticism, conceit, and obstinacy, properly directed and controlled by competent teachers, become most desirable qualities in building a strong and vigorous manhood and womanhood.

22. *The social nature at the beginning of this period commences to assert control, and hence demands the special attention of parents and teachers.*

(a) During infancy and childhood the element of sex has played but a small part in the social intercourse of boys and girls. They have thus far associated together in sports and common enjoyments. They have formed attachments growing out of these associations. Now, however, another and more suitable element than sports and common enjoyments determines the attachments formed. Now, to the boy the society of girls is becoming more attractive than that of boys, and to the girl the society of boys than that of girls. This condition of things is in the order of nature. The evident duty, therefore, of parents and teachers is to direct and control, not to crush, this inherent and refining natural tendency of our being.

(b) The emotional nature and the imagination play a very important

part in shaping the social relations and the general course of conduct of this period. It is a common saying, "boys and girls are impulsive." We mean by this that they act from their feelings rather than from the dictates of their reason and judgment. In this connection it should be carefully noted that the emotional nature is exceedingly inventive, and that this inventive power is in some degree universal. There are comparatively few, who, in matters requiring the exercise of pure intellect, are inventive; yet every one, in matters pertaining to the feelings, possesses this power. This is particularly true between the ages of fifteen and twenty-five. Hence the endless variety of devices by which young people are able to carry out the demands of the feelings and of the heart; hence, also, the importance of supplying the proper social conditions for the exercise and training of this power.

(c) An over-exercise of the social nature which draws so largely upon the feelings, or emotions is productive of great injury both to the body and to the mind. The effect of such a course upon the body has already been pointed out in 11 (c). A similar effect is produced upon the mind by such a course. Rugged and clear thinking, even in the case of what may be called strong and matured minds, soon becomes impossible if the emotional nature is overtaxed. How much more, then, is the intellectual vigour of boys and girls undermined by indulgences in social life and by the reading of sensational books, both of which make a strong draft upon the feelings? Under such conditions, they soon reach a point where they spend a large share of their time in a dreamy, passive state. They lose all desire for positive, active, vigorous mental work. This is only one of the many evil results of over-indulgence of the social nature,

so commonly permitted and even encouraged by parents of the present time. There is a golden mean in this matter, and parents and teachers should not fail to adopt it, as either extreme is productive of great injury.

23. *The development and training of the moral nature should receive the first attention of parents and teachers during each of these three periods. Under proper guidance all the activities of the intellectual nature may gradually be subordinated, as they ought to be, to the control of the conscience.*

(a) The conscience is as susceptible of education as any other power of the mind. Its developments run parallel with the development of the intellectual powers. It manifests itself in infancy in enforcing obedience to the simple laws of nature learned through experience. The "ought to be" and "ought not to be" enters very early into the child's consciousness. Indeed it accompanies every experience he passes through where he knows that one of two courses would avoid pain or suffering. A mistake is very commonly made regarding the province of the conscience. It is practically restricted by many in its operations to what is known as the spiritual part of our being. Conscience to such has nothing to do with the ordinary exercise of the functions of the body. This is a great mistake, and leads to fatal results in the training of the infant and child. The decisions of the conscience are coextensive with the work of our entire being. They alone settle authoritatively *when, where, how, and for what purpose*, each function of the body and each power of the mind ought to be exercised.

(b) The development and training of the conscience is usually sadly neglected. From infancy up to manhood, in all matters pertaining to the intellect, every encouragement is given to independent action, and the results and decisions reached are respected.



It is assumed in this case that there is an inherent power in the child to see things as they are that can be trusted. And because of this assumption, such work and exercises are entrusted to the child as develop and train, his intellectual powers in a proper manner. The opposite of this course is pursued with the conscience. From infancy up the child is treated as if he had no *spiritual eye*, by which to see the *ought to be* and the *ought not to be*. His parents' and his teacher's spiritual eyes are supposed to do all the seeing where the "ought to be" and the "ought not to be" are to be considered. He is expected simply, machine-like, to execute orders without any regard even to the existence of his conscience. Such a course, and it is a very common one, soon dwarfs and warps the conscience so that its authority is little felt or regarded.

(c) The proper development of the moral nature demands that the conscience should be constantly called into exercise. Commencing with infancy, the child should be guided so that he will acquire the habit of considering always before doing a thing, whether it *ought* or *ought not* to be done. This habit should not, as is frequently the case, have reference to one or two classes of acts, as for

example, obedience to parents and truthfulness. It should be coextensive with the child's activities, including the exercises of the body and of the mind. Here it should be carefully noted that the decisions of the child's conscience have reference to the child's view of the conditions presented. They should be judged and respected as such. The development of the moral nature is possible only by requiring the child to exercise his conscience in making decisions for himself regarding the "ought to be" and the "ought not to be," and to act upon these decisions when made. This course should be pursued from infancy to manhood by both parents and teachers. In all kinds of school-work, as well as in matters of conduct, there should be a systematic, constant, and direct exercise of the conscience. Pupils should not be forced or induced to perform their work, or to pursue a required course of conduct simply by the use of artificial devices, such as marks, prizes, and so forth. These devices may be used so as to secure present results, but they never leave a permanent impression upon the mind which will be of service in their absence in controlling and directing both work and conduct.

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### INEQUALITY OF THE SEXES.\*

MISS S. STEWART, AT THE OTTAWA TEACHERS' ASSOCIATION.

(Published by request.)

THE question of the equality or inequality of the sexes has been mooted at different meetings of this Association. At a recent meeting, one of the gentlemen, a mathematician, remarked that he had found,

from his own experience, that though girls up to a certain limit were the equals of boys, beyond that limit they did not attempt to compete with boys. He acknowledged that there were exceptions to the rule, and named Miss Watson as an eminent mathematician. Another gentleman, also, a mathema-

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\* Read before the Ottawa Teachers' Association.

itioner, remarked that upon examination, Miss Watson's work was found to be erroneous and unsatisfactory. Perhaps you think I am about to attempt the refutation of these statements. Not so. I regard the fact that though girls can and do successfully compete with boys in mathematics, yet, that having arrived at years of discretion, they have sufficient strength of mind to shun this unhappy subject, as one of the best proofs that could be given of their common sense. Do not run away with the idea that I am speaking in disparagement of the mathematical sciences. While I well know it is right and necessary that the high cliffs should be scaled, that lofty towers should be erected, that the high masts should be mounted; I am glad to know that my friend is tilling the soil, or gathering flowers upon the grassy slopes—so I am pleased that young ladies choose rather to gather the pearls of thought in the world of literature, than to scale the dizzy heights of higher mathematics.

Miss Watson died at the early age of 22 years. Under the circumstances, I think it was the wisest course she could pursue. Should any young lady present be turning her ambitious eyes towards the field of mathematics, I trust Miss Watson's unfortunate career will constrain her to desist. You ask then, ladies and gentlemen, do I consider the intellect of woman equal to that of man? I go one step farther, and say I consider it to be superior. With your kind permission, I will present the subject in a thoroughly practical manner. Place a man and a woman in equally trying circumstances say, for instance, that Johnnie demands a story, baby is fractious and must be amused, and there are twenty-four yards of bias ruffling to be cut out at one and the same time; and I am willing to allow your representative man to be the

most thoroughly conscientious Christian man you can find, while any average woman will do to represent the other side. Who do you suppose will pass the afternoon with the greatest serenity of mind, and cut out the bias frills with mathematical accuracy? I leave the answer to this conundrum to the attentive listener. If you say the man has had no previous practice in cutting out bias frills, why I would not be unkind: I am willing to allow him to substitute the putting up of a stove for the frills. Take the simple operation of putting up a stove alone, and even with his wife's superintendence, direction and help, I would like to see the man who would maintain throughout an affable and polite demeanour. In the words of Betsy Prig, the friend and partner of Dickens' illustrious character, the immortal Sairey Gamp, I would simply say, "I don't believe there aint nosich." Again I maintain that in debate, woman is superior to man. Listen to an argument between a man and his wife, as to whose fault it was that the coal fire went out in the night. The clear, true and forcible manner in which the woman puts forward her side of the question will at once convince you of this fact.

Again I argue that the reasoning power of woman is superior to that of man. Let any woman reason with her husband as to the propriety of such conduct, for instance, as remaining in the billiard or club-room till two o'clock in the morning—if I mistake not, he will find discretion to be the better part of valour, and change the topic of conversation as soon as may be. From a business point of view also, I think it must be admitted that woman takes precedence of man: Send a man to match a skein of embroidery-silk or to buy baby a dress, what will be the result? In nine cases out of ten the embroidery-silk will be of the wrong shade, and baby's dress

will be of a colour and texture that would please the eye of a wild Indian, and sufficient to clothe an elephant. When reasoned on the folly and wickedness of such conduct, he will, in all probability, reply, "Well, you should have gone for it yourself."

A woman can follow up a train of thought more clearly than can a man. It is raining heavily, and the new silk umbrella which Mrs. Jones has never had out but once is lost. Whose fault is it? Mr. Jones will try, but his efforts will be futile to throw the blame on his wife.

Mrs. Jones will systematically, step by step, follow up that umbrella till she proves, and that conclusively, that Mr. Jones, deliberately, in cold blood, and with malice aforethought, loaned that good umbrella when his wife was on a visit to her mother. It will be shown, as a side issue, that this course of conduct will, if persisted in, land himself and his family in destitution and penury. The character of ladies' associations is of a higher tone than those of men, though some men try to detract from the elevated nature of the proceedings, by making the assertion that sewing societies and meetings of a similar kind, which ladies delight to frequent, are but schools of scandal. It may be that a great deal of valuable information is disseminated at these laudable institutions; but, for pure unadulterated scandal, you must enter the arena of politics which men have so far monopolized. The character, history and private affairs of not only every possible candidate for parliamentary honours, but that of all his wife's relations, are freely discussed and commented upon. If we read the leading organs of both political parties, and credit the state of things which they represent, we will be forced to the conclusion that in our legislative halls we have not one disinterested statesman, not one patriot, not one

honest man. If this state of things be true, does it not seem strange that men should take pleasure in publishing their own shame, and, if it be not true, is it not equally strange, that men, for such paltry considerations as office and emoluments should be willing to sully the honour of their country?

Macaulay tells us of a time in the "brave days of old"

When none was for a party, but all were for the state.

That time has passed, and now we have the reverse of the picture—"Grit is to a Tory more hateful than a foe," and *vice versa*. Every man is for his party, and the state must take care of herself. If Diogenes could re-appear upon the scene, to resume his fruitless quest of yore; and, if he have gained wisdom in the meantime, w'ich it is to be sincerely hoped he has, he will seek for, and find honesty and integrity of mind; not in the ranks of men, but in a different quarter. A gentle and cultured young lady, upon being questioned by her father as to her feeling towards an aspirant for her hand, said: "No, Papa, I do not wish to marry yet; what I want is a husband with lofty ideals, noble aspirations; one who will eschew all the vanities and frivolities of life, and strive to make his existence as a beautiful song." Her father looked thoughtfully into the fire for a few moments, then, with tears in his eyes, and in a tone of deep depression, remarked, "My daughter, you are but a stranger here; your place is in a better world than this." It matters not how much a woman may have at stake in the country; how ardently she may desire to see rights maintained, to see wrongs redressed—she may be intelligent, cultured, refined—all this counts for nothing in this land in which the highest ruler is a woman whose administrative abilities have been unquestioned: a man may be ignorant,

uneducated, illiterate—able only to make his mark upon the ballot-paper—his vote to him merely a merchantable piece of property; but he is a *man*, he must have a voice in the councils of the people.

If ever the time comes when poli-

ticians are single-minded and sincere, when lawyers are truthful and honest, when ministers preach sermons only twenty minutes long, and when women have a vote, then, I think we may safely say that the millennium is close at hand.

## THE RELATIONS OF HISTORY AND GEOGRAPHY.\*

BY JAMES BRYCE, M.P.

THE subject of which I have to treat—a subject so large that I shall not be expected to do more than touch on a few of its salient features—is the relation which ought to exist between the study and the teaching of history and the study of geography. What are the points in which chiefly these two subjects touch one another? What is the kind of geographical knowledge which the teacher of history ought to possess in order to make his historical teaching as exact and complete, as philosophical and suggestive, as possible? I will attempt to indicate some of the points where geography and history touch one another, and to show from what sort of treatment of geography it is that light may be thrown on the progress and life of nations and of States.

Geography is as a meeting-point between the sciences of Nature and the sciences of man. I do not say it is the only meeting-point, for there are others; but it is one of the most conspicuous and important, for geography has to look upon man as being a natural growth—that is to say, a part of Nature, a part of the physical world—who is conditioned in his development and progress by the forces which

Nature brings to bear upon him. In other words, he is in history the creature of his environment, not altogether its creature, but working out also those inner forces which he possesses as a rational and moral being; but on one side, at all events, he is largely determined and influenced by the environment of Nature. Now, this environment is not everywhere in Nature the same. There are certain elements of environment which belong to the whole world, and affect all its inhabitants, but there are others in which different countries and different parts of a country differ; and it is in discovering the varying effects produced on the growth of man as a social and political, a wealth-acquiring and State-forming creature, by the geographical surroundings in which he is placed, that we find the meeting-point of geography and history. If we were studying zoology, and investigating the history and peculiarities of any species of animal, we could not do so apart from a knowledge of the country which it inhabits and the kind of life which the character of that country compels it to lead. In the same way, if we look at man as a part of animate Nature, we must have the same regard to the forces Nature brings to bear upon him, and the opportunities Nature holds out to him. Of course, in the case of

\*An address delivered to the Royal Geographical Society on January the 19th, 1886, in the rooms of their Geographical Exhibition.

man, the problem is far more complex and interesting than in the case of any other creature, because man is a more varied and intricate being, with his activities more multiform, and because these activities have been continually expanding themselves and establishing fresh relations between himself and the rest of the world. Therefore the study of man in Nature is far more vast and difficult than the study of other types of life. Yet even man, although he may lift himself above his environment, cannot altogether escape from its power. He must obey, suiting himself to the conditions and to the influences in and through which the environment plays upon him.

We may divide these influences of the environment under three heads or groups. The first will include those due to the configuration of the earth's surface; that is to say, to the distribution of land and sea, the arrangement of mountain chains, tablelands and valleys, the existence of rivers and the basins which they drain. These features of the configuration of the earth's surface act upon man in a great variety of ways. I will endeavour presently to illustrate some of them, but for the moment it may be enough to say that in early times it is they which determine the directions in which races move,\* the spots in which civilization first develops itself, the barriers which separate races and States from one another. Upon them depend, in more advanced periods, the frequency and ease with

which communication takes place between two races or political communities. The configurations of land and sea are, of course, the dominant factors in fixing the lines which commerce takes. Even if we come down to such a minor point as the character which the structure of the land gives to the coast, we remark that it depends on this structure whether there are many ports and harbours or not. In Norway, for instance, one perceives that a mountainous land, raised at a very remote geological epoch, has caused the coast to assume its present highly indented form, and has fringed it with a line of sheltering islands. Hence an abundance of safe ports and inlets giving opportunities for the growth of a seafaring people, who at one time became famous for piracy, at another wealthy by their mercantile marine. Compare such conditions with those of countries where the want of harbours makes it difficult for the people to turn to account the advantages which the sea offers them.

A second class of environment influences would be those belonging to meteorology and climate, meaning thereby the conditions of heat and cold under which a race of men develops itself, with the amount of rain and frequency of drought. Such influences tell upon the strength and stature, as well as upon the health, of a race. There are also the winds, whose importance is not confined to commerce, but powerfully affects climate also. Heat and cold make all the difference to the kind of life which primitive man leads. Rain and drought are prime factors as regards the fertility of a country, its products and the habits of life of the people who dwell in it; for instance, a race will become settled and agricultural in a well-watered country, while remaining nomads in one subject to extreme droughts; and all the influences that bear on the healthiness of the

\* Sir J. D. Hooker made, *à propos* of this, the interesting remark that some of the lowest and apparently oldest of the races of man are found at the extremities of the continents, to which they would seem to have been pressed down by more vigorous tribes. Thus the Bushmen are at the southern end of Africa, the Fuegians of South America, the Tasmanians of the Asiatic-Australian group of lands, the Veddahs of Ceylon at the southern extremity of Asia.

people of a particular country have an immense deal to do with the degree of civilization which the population attains, and the capacity of the territory to become the home of immigrants from other regions. I may, perhaps, tell you of a remark I once heard on the subject from the most illustrious patriarch of modern science. The last time I saw Mr. Darwin, shortly before his death, but when he was apparently in good health, the conversation happened to turn on the parts of the earth which still remain available for occupation by civilized man; and it was remarked that as North America was now nearly filled up, it was not to be expected that there would be in any other region an equally great development of civilized nations, since such comparatively thinly peopled regions as exist in Central Africa and South America suffer from the prevalence of malarial fever and other maladies incident to hot and moist climates. Mr. Darwin observed that this might depend on the progress of medical science, that it was quite possible discoveries might be made in medical science which would render tropical countries less dangerous to the white races, referring to the researches of M. Pasteur, and the probability that that line of medical research might be worked out much further by discovering methods of inoculation which would preserve the human body against the attacks of intermittent fevers. Any one can see how important a factor in the future of the human race is the circumstance that nearly all the regions which can be inhabited by civilized European man, with our present knowledge of medicine, are fast being occupied, and that some further discovery in medical science or change in modes of life will be necessary if the Equatorial regions are to become available for European immigration.

We may, I think, put into the third

class of influences of environment the products which a country offers to human industry. There are its mineral products, which become valuable by mining, or digging for sulphur and gypsum, or quarrying building-stone. It is worth observing that you may classify countries and parts of countries according as they are stone-building or brick-building regions, and you will be surprised to find the difference in architecture between the two. If you travel across Italy from east to west, for instance, you constantly get out of brick and into stone regions as you enter the mountains, and you find the character of the cities alters immediately. In civilized States, the products of a country obtain their chief importance as determining the extent and nature of its commerce. But in primitive times they affect the type of the race itself through the primary necessities of life, such as food, clothing, fuel. A race, however naturally vigorous, which finds itself in a country where the severity of the climate or sterility of the soil limits production, will find its progress in the arts and refinements of life fatally restricted. This has happened in Iceland, where the race is of admirable quality, but the country produces nothing save a few sheep and horses, and some sulphur; it has not even fuel, except such driftwood as is cast on the shores. And if you take such a part of the world as Central and Northern Asia, you will see that the highest European races would, if placed there, find it almost impossible to develop a high type of civilization for want as well of fuel as of the sources of commercial wealth. The same considerations apply to the animals the country produces. The animals affect man in his early state, in respect to the enemies he has to face, in respect to his power of living by the chase, in respect to the clothing which their furs and skins offer to him, and

in respect to the use he is enabled to make of them as beasts of burden or for food. Therefore, zoology comes to form a very important part of the environment out of which historical man springs.

The consideration of these various kinds of influence will suggest a number of heads or branches of geography which may be worked out, each of which may be found to have an important bearing on history. I will suggest a few.

There is ethnological geography, which will be concerned with the races of men, their distribution and mutual relations to one another. There is sanitary geography, in which we shall examine the extent to which different parts of the earth's surface are fit for the maintenance of man with a prospect of long and vigorous life, what kinds of diseases dangerous to man each region gives rise to, what influence these health conditions will exert on the capability of the region to receive or permit the increase of a race accustomed to a different climate. Then there is commercial geography, which is concerned with the interchange of products. There is linguistic geography, showing the distribution of languages and examining the causes which diffuse some tongues and extinguish others. The constant diminution in the number of languages spoken in the world is among the most striking facts of history, and proceeds faster now than in earlier times. There is political geography, which shows what are the relations of the artificial boundaries of States to the natural boundaries which Nature has tried to draw, and which have become of later years more important by the consolidation of small States into large ones. It is a subject with several subdivisions, such as military geography, legal geography, the geography of religions. Military geography will show how mountain

chains and passes and the courses of rivers determine the lines followed by national immigrations, by invasions, and by the march of armies, and will indicate particular parts of the world, such as the plains of Lombardy, Belgium, the north east of France, or to take a familiar instance from our own island, that part of Scotland on the middle course of the River Forth, as the places where we must look for the theatre of military history. With regard to the military study of the geography of the Alps, I do not know any more interesting work for a member of the Geographical Society or of the Alpine Club to devote himself to than a history of the Alps, showing what during the Dark and Middle Ages were the means of transit across this great mountain barrier, and the routes followed by the armies which so frequently marched from Germany or France into Italy.

There is also legal geography, which is concerned with the relations which law bears to geography in respect to the special provisions that have been made regarding those particular parts of the world where different States are concerned in securing free transit through arms of the sea. Legal geography has had a great deal to do with regulating the navigation of the Sound between Denmark and Sweden, and of the Great and Little Belts, as also with the Bosphorus and the Dardanelles, as being sea channels in which several States are interested, and which therefore cannot be surrendered to the absolute control of one State. And I need not say that in respect of that half artificial, half natural passage, the Suez Canal, one finds geography intimately connected with a subject apparently so remote from it as law. Then there is Commercial Geography. The science of commerce depends so directly upon the configuration of the earth and the productive aptitudes of its countries,

and in its turn affects so potently the course of economic and political history, that I shall be content with one illustration—that drawn from the Suez Canal, which has just been referred to in its legal aspect. The line of the Red Sea, and the passage from the Red Sea to the Mediterranean, through Egyptian territory, was a very important trade route in ancient times, and it was with a view to the trade coming from the East that Alexander the Great did one of the most considerable acts of his life when he founded Alexandria. That continued to be an important route during the later Roman Empire and through the Dark Ages, so far as those troublous times permitted, and the products of India and Equatorial Africa came up the Red Sea and across the Isthmus, and were shipped at Alexandria to the Western World. There was also an important trade route through Central Asia, which, coming down through Persia and Mesopotamia to the Levant, reached the sea in Northern Syria, and another through Northern Persia and Armenia to the easternmost ports of the Black Sea. These trade routes assumed enormous importance in the earlier Middle Ages, and upon them great political issues turned. Venice, Genoa, Pisa and the other commercial cities of Italy, depended on this Eastern trade. The Genoese had for a time a monopoly of that in the Black Sea, and founded settlements and built forts of which the ruins may still be seen on the north coast of Asia Minor. So things went on till the Portuguese discoveries of the fifteenth century. After the discovery of the Cape of Good Hope, these trade routes into the Mediterranean fell into disuse. Thus withered the commercial greatness of Venice. She ceased to be a great trading power, and had to live on her Italian territories and such fragments of dominion as she was able to pick up out of the wreck of the Eastern Roman

Empire. Venice was in most intimate relations with the other States of Italy—with Germany, with the Pope and with France—and all these political relations were affected by the discovery of the route round the Cape. In the course of the last century the sea traffic with the East, which had been divided between Portugal, England, and Holland, for the share of Spain had become small, passed chiefly into the hands of English merchants. England has become the great maritime power, for the purposes of commerce as well as of war, and it is her commercial interests that led her to acquire dominions on the Asiatic continent, and made her at last the imperial power of the East. Then comes M. Ferdinand De Lesseps. When the Suez Canal is opened the trade route round the Cape suddenly stops, as the passenger route had ceased some time previously, and trade again begins to flow through the Red Sea and by the new canal into the Mediterranean, and the products which came round the Cape now come to Southern Europe direct, and the Russians get their tea straight from Canton or Shanghai by steamers which run from those ports to Odessa, and Southern France gets her cotton and silk through the Suez Canal to Marseilles; whereas formerly the great bulk of Eastern imports was shipped to England and the other ports of North-Western Europe, and were thence distributed over the Continent. Thus the result of the making of the Suez Canal is that we are no longer the great centre of European distribution. We are still a financial centre, where the financial part of the business is mainly transacted; but we are no longer a country which receives and distributes the products, as we were before the Suez Canal was opened. This change is obviously fraught with results which may be of great importance in the future. We know what a large part the Suez Canal



has played in the politics of Europe during the last ten or fifteen years, and herein we see how much may be due to one single change in the relations of land and sea.

So, also, it would be easy to show how the opening of the Panama Canal (if it ever is opened, and its prospects are for the moment not encouraging) will affect trade, and through trade, political history. It would powerfully tell upon the commerce of Europe with Australasia, a great part of which would be diverted from the Suez to the Panama route. A great development would be given to Oregon, British Columbia and the western coast of South America. The Californians would be able to defy that great transcontinental railroad company which now controls them in so many ways. Chili, Peru and Ecuador would be brought within the closer touch of the great European Powers and of the United States. In fact, the history of all the countries bordering on the Pacific would be absolutely changed if this cut were made between the Caribbean Sea and the Pacific.

Perhaps no two illustrations could be more to the point than these of the two inter-oceanic canals. But a simple method of endeavouring to apply such general considerations as have been put forward is to run through some of the leading countries of the world, and show how we can bring the light of geography to bear on their political, social and economical history. Such illustrations will explain how the possession of geographical knowledge and a full grasp of the geographical conditions under which nations and States grow up will enable a person studying their history to comprehend it more adequately and realize it more vividly.

Let us begin with the largest of the continents and the one where the curtain first rises on civilized man. What light on the historical growth and

progress of Asia will be thrown by a knowledge of her natural conditions? We perceive that the whole centre of Asia is a mass of high land, of dry land, and of land not pierced by any inlet from the sea. This is the dominant fact of Asiatic geography. Consequently, we shall not expect to find in this central area wealth, or the commerce which grows out of wealth, or any large population, because the conditions for the growth of wealth and population do not exist in a lofty and arid table-land. We shall rather be led to look for such growth of population in the river valleys which fall in different directions from the great central plateau of Asia: but we shall find it in the east and south, not in the north, because the rigorous climate of the north will not permit the production of wealth by agriculture, or of the existence of a large population. The north of Asia is cold, not only in respect of its latitude, which is, after all, a secondary condition in these matters, but because it is cut off by the great intervening mass of high land from the kindly influence of the south and exposed to blasts from the Frozen Ocean. We shall find, therefore, that the inhabitants of the centre of Asia will not be in very close commercial or political relation with the north, because the north is poor and thinly peopled; nor in active relation with the west, because the west is mainly desert down to the Sea of Aral and the Caspian. Neither will there be a great deal of intercourse with the south, because Tibet and Eastern Turkestan are cut off by the great snowy barrier of the Himalaya from the plains of India. This barrier is indeed pierced by passes, but owing to the very heavy rainfall on its southern face, forms a belt of country which the masses of snow and glacier above, the deep and densely wooded valleys below, make more difficult to traverse

than are the dreary plateaux of Tibet.

These things being so, the historical relations of Central Asia must obviously be rather with the east than with the west, but more with both east and west than with the north and the south. Such has been the case. Central Asia has come comparatively little into the history of the world. When she has done so by sending out swarms of invaders, as in the days of Attila, or again in those of Zinghis Khan and Timour, these invading tribes have seldom maintained their connection with the centre. Sometimes they have shrunk back, their empires being broken up after one or two generations. Sometimes they have become absorbed in the population of the conquered country, and lost their hold on their old home. This has been the case with the Ottoman Turks, who are to a comparatively small extent of pure Tartar or Turcoman blood. A Central Asiatic race may form an empire—a vast one like that of Zinghis, or a small one like that of the Ephthalites; but such an empire either swiftly dissolves, owing to its wanting a nucleus of settled and civilized population, or else the race which creates it becomes practically merged in the inhabitants of the conquered districts. It is thus that the Turkish Empire lives on now after two centuries of steady decay. The Mogul Empire in India lasted to our own day, for it was not absolutely put an end to till the Queen of Great Britain assumed the direct sovereignty of British territories in that country after the Mutiny of 1857, although it had practically ceased to exist a good while before. Here you have the fact that wherever the Central Asiatic races come down to the west or south, they get severed from the original stock. Whether they found empires or are absorbed and so disappear, in neither case is the connection a lasting one. But in the east they have more than once conquered

China, and their connection with China is maintained because there is no such marked barrier between the great central plateau of Asia and the valleys of China, as is constituted by the deserts of the west, or the mountains in the south. To this day China rules as far west as the Thian Shan, her own present dynasty being sprung from the sons of the desert. The tie between Central Asia and China has thus been maintained, whereas that between Central Asia and the rich southern and south-western countries of Asia was soon broken.

One may apply what has been said about Asia to Asia Minor. The inner part is a high, dry, bare plateau, not so inhospitable as the great central plateau of Asia, but presenting, in miniature, similar features; and you will find here, also, that civilization has sprung up round the coast, but has attained less high development in the interior, that the influence and importance of the interior has therefore been comparatively slight, and that some of its mountainous regions have been but little affected by the great changes which passed upon Asia Minor as a whole. It was the nature of his territories that enabled Mithridates to give so much trouble to the Romans. Later on, we observe that the Isaurians were but little affected by the Roman Empire down to the seventh or eighth century; as similarly the people of the hill country Cilicia remained scarcely touched by the tides of invasion and conquest which swept past them. Thus a body of Armenian Christians has in its mountain fastnesses north of the Gulf of Scanderoon maintained a freedom almost amounting to legal independence from the fourteenth century down to our own days. This was due to the fact that there was little in these countries to attract invaders, and that they were difficult of access owing to the mountain structure.

## NOTES FOR TEACHERS.

MANY of our district schools will soon go into the hands of young beginners in the profession of teaching who have succeeded in getting the requisite certificate. Some of these new ones will become good teachers after a season of experience, but all will at first be measured by the success they have in governing the school. The great key to success in this respect is *keeping the pupils busy*—an easy task if the young teachers have had a thorough drill in the studies they are to teach and have been intelligent readers of good books. A deficiency in this respect can only be partially remedied by lively study and reading in connection with school work. Too many, however, are content to “keepschool,” put in time, draw pay regularly, and not prepare carefully for each day’s work.—*The Moderator*.

If a teacher has a good moral character, still better, a Christian character, for Coleridge says :

Morality is the body of which Christianity  
is the soul,

such an one in these days should by all means have the preference. Some school officers will not stop to think of this, though they might much prefer such a man to take care of their horses and cows, because he would be safer, having more self-control, more kindness, as well as other qualifications. But how much more important that a teacher of youth should have other qualifications than those that are merely intellectual! A school that is trained in intellectual attainments alone may turn out some first-class rascals in due time. In a word, there is a heart culture as well as a

head culture, and there is no true education, no true culture, without the former. More attention must be devoted to practical ethics in the common school, or we are in the way to ruin as a people. The teacher whom the writer recalls with deepest gratitude, and whose memory shall forever abide, was one who in the days gone by made the personal appeal to honour, giving the earnest word of warning now and then, and affectionately pointed the way to truth and right.

THE INVENTION OF SUGAR.—The exact date of the invention of sugar, or of its first application, is hidden in the uncertain regions of mythology. The Chinese are said to have been acquainted with it three thousand years ago, and there is considerable evidence that they manufactured it over two hundred years before the Christian Era. Many maintain that sugar was first made in India, and it is not at all unlikely but that the Indians learned to manufacture it from the Chinese, and it was from them that the knowledge was carried west. It is related that over three hundred years before Christ, Alexander sent a large fleet down the river Indus to explore the adjacent country, the commander of which brought back an account of a honey (beyond doubt, sugar), which he said the Indians made from some method with the assistance of bees. This is said to be the first intimation the Western people had of sugar. The process of refining sugar is generally conceded to be an invention of the Arabs, and was not known in England until 1659. It is related that a Venetian merchant obtained the secret from the Tarans of Sicily, and sold his knowledge of

the art for one hundred thousand crowns. In some parts of the world sugar was used as medicine, and we find that as late as A.D. 150 the celebrated physician, Galen, prescribed it for this purpose. Sugar was a great luxury before it was discovered in this country, and all that England consumed as late as during the year 1700 was twenty million pounds, whereas the consumption, during the same period there, now amounts to twenty million hundredweight.

SCHOOL SAVINGS BANKS.—The scheme has not been without its opponents. To make "penny saving" children, it is objected, is to breed a race of miserly screws, of "little sordid, narrow-minded, cold-hearted economists"; to rob children of the small innocent pleasures derived from spending their "tips" at once, is to cheat them of the joys of childhood, "take from them the light-heartedness which is their greatest charm," and so on. There is, perhaps, some little modicum of truth in these objections; it may be to some extent regrettable that there should be any necessity for abridging the joys of childhood on any side; but the objections lose all force when confronted with the reali-

ties of life. The children of the poor will soon learn as they grow up that they cannot spend their shillings, or even their pennies, on momentary gratifications without suffering for it; and is it not better that they should have acquired the habits of providence when young and be able to practise them without effort? Besides if not learned when young, the probability is they will not be learned at all. Children should be trained in such habits as make the best men and women, and these are certainly not habits of thoughtless and wasteful spending. That the working classes can save as well as spend is abundantly evident from their accumulations in adult savings banks, friendly societies, and such like; but look at those who do so save; and what do you see? Not thoughtless spenders of odd shillings, but temperate and prudent people, such as "penny saving" children will naturally grow up to be. "The child is father of the man," and the "sweetie-sucking" child is the natural father of all those who live from hand to mouth, in alternate waste and want, with nothing to buy an umbrella for a rainy day—nothing between old age and pauperism. Let the School Savings Banks flourish.

## GEOGRAPHICAL NOTES.

HOW TO TEACH GEOGRAPHY.—The most common errors made in teaching geography are:—1. Attempting to teach too many facts (details). 2. Failure to train the intellect properly; burdening the mind with disconnected facts, unfamiliar knowledge. 3. Losing sight of the great purpose of all teaching, *all* school work, to interest your pupils in the study of nature, the world in which we live, its beauties and resources. Real know-

ledge does not consist in storing away a multitude of *detached* facts, but in effecting such an arrangement of them that they can be readily reached and employed when required. No teaching can be considered *scientific*, that lacks system, perspicuity and logical sequence, and that does not aim to relieve the memory of unnecessary effort, as well as secure a clear comprehension of the principal *truths* through certain principles, a

careful study of which supplies a full explanation of detailed facts, by the application of these principles. Geography, as generally taught in our schools, is dull to the boy, and useless to the man. It should be presented to the learner as a science, rather than an assemblage of disconnected facts. The natural features of the earth, the atmospheric phenomena, and the animal and vegetable life, should be treated as *parts* of a great mechanism, with *definite* offices to perform. The study of the divisions of water, mountains as regulators of rainfall, geographical position and climate as determining the products and industries of the earth, should be made with reference to their effects upon trade and commerce, domestic and foreign. All legitimate interest begins with "home." "The world we live in;" "We and our neighbours;" "The way we live, and what we do now;"—these are the captions which should head a natural system of Geography. Beginning thus, education would leave the pupils fitted to learn from the last and greatest teacher, Life,—not mere existence, nor personal observation, simply, but the observation and experience of thousands, brought together and laid before us by Life's most active educators.—*Selected.*

NEW ZEALAND SCENERY.—Australia has hills and rivers, woods and fertile lands; but unless in the heated plains of the interior, which are sublime in their desolation, it has nothing to touch the imagination, nothing to develop varieties of character. In New Zealand there are mountain ranges grander than the giant bergs of Norway; there are glaciers and waterfalls for the hardy hill men; there are the sheep-walks for the future Melibœus, or shepherd of Salisbury Plain; there are the rich farm lands for the peasant yeoman; and the

coasts, with their inlets and infinite varieties, are a nursery for seamen, who will carry forward the traditions of the old land. No Arden ever saw such forests, and no lover ever carved his mistress's name on such trees as are scattered over the Northern Island while the dullest intellect quickens into awe and reverence amidst volcanoes and boiling springs and the mighty forces of nature, which seem as if any day they might break their chains. Even the Maoris, a mere colony of Polynesian savages, grew to a stature of mind and body in New Zealand which no branch of that race has approached elsewhere. If it lies written in the book of destiny that the English nation has still within it great men who will take a place among the demigods, I can well believe that it will be in the unexhausted soil and spiritual capabilities of New Zealand that the great English poets, artists, philosophers, statesmen, soldiers of the future, will be born and nurtured.—"*Oceana*," by J. A. Froude.

THE UPS AND DOWNS OF AN ISLAND.—A despatch was recently received by the Government of New South Wales from the Imperial Government offering to hand Norfolk Island over to the colony. Since 1856 the island has been under the jurisdiction of the Governor, and the proposal now is to make it a portion of New South Wales territory. Norfolk Island, discovered by Captain Cook in 1774, is situated in about latitude 29°34'5" S., and longitude 167°58'6" E., and is about 600 miles distant from New Zealand and 900 from Australia. It is about 1,100 miles from Sydney. At the time of its discovery the island abounded with many trees and plants common to New Zealand, and in addition to these there was a remarkable growth of magnificent pine trees. The first settlement on the island

was made on the 14th February, 1788, a week after the formal establishment of the colony of New South Wales. The little colony consisted of 24 individuals, all told, 15 of them—nine men and six women—being convicts; and they were placed under the control of Lieutenant Philip Gidley King (afterwards one of the Governors of New South Wales), who was provided with a small staff of officers. Glowing accounts were received from the island, and a large party was very soon sent to increase the number of persons there. Not long afterwards Lieutenant King had conferred upon him the title of Lieutenant-Governor of the island, and this title was borne by several who succeeded him in the post of chief official. The prolific soil of Norfolk Island proved a great boon to the parent colony at critical periods in the early history of Australian colonization, the quantity of wheat produced being always very great. The island had attained considerable prosperity before 1793, not only as a grain producer, but on account of its valuable timbers. In that year the population was 1,003 and the produce 2,000 bushels of wheat and 50 tons of potatoes. It was decided in 1800 to abandon the place, but the inhabitants, who then numbered 1,000, were extremely averse to leaving their homes, and five years were occupied in removing them. Norfolk Island played an important part as a penal settlement and its history as such is considerably mixed up with that of Tasmania. On 2nd April, 1844, the island was declared to be no longer a dependency of New South Wales. Under letters patent it was severed from the Government of New South Wales and the diocese of Australia, and was annexed to the Government and colony of Van Dieman's Land, and to the diocese of Tasmania. After the cessation of transportation to New South Wales, Van Dieman's Land became the only

colony of the Australasian group to which criminals were sent from Great Britain; but in 1853 the transportation system to those colonies finally ceased, and Norfolk Island, when no longer used for prison purposes, became almost deserted. The convict establishment was withdrawn from the island on 7th May, 1855, and the descendants of the mutineers of the *Bounty*—the Pitcairn islanders—were removed thither from Pitcairn's Island in May, 1856. These islanders consisted of about 150 adults and 48 children, and the Secretary of State, desirous of consulting their comfort and welfare, issued instructions that they should be interfered with as little as possible, and that their existing social system should be maintained. A magistrate and a chaplain were at once appointed for their service. By proclamation of Sir William Denison, as Governor-General of New South Wales, dated 31st October, 1856, it was declared that Norfolk Island should from the date of the proclamation be separated from Van Dieman's Land (then called Tasmania) and be created a distinct and separate settlement, to be ruled by a Governor exercising plenary powers, and that until further ordered the new colony should be under the jurisdiction of the Governor for the time being of New South Wales; that it should have a great seal of its own; and that for the better management of the island, the Governor should have certain extensive powers. Governor Denison visited Norfolk in 1857, and while on the island framed a political constitution for its government. This placed the island in charge of an executive Government, consisting of a chief magistrate and two councillors elected annually. Six months' residence, being 20 years of age, and ability to read and write, were the electoral qualifications. The chaplain presided at elections, and opened the proceedings with prayer.

Education was compulsory under a penalty of 6*d.* a day for default and an educational poll-tax of 10*s.* per annum, which was paid without deduction to the schoolmaster, was exacted for each child. The chaplain was also the head of the Education Department. Intoxicating liquors were only to be used medicinally, and to be issued by the chaplain, and the issues were to be noted in a register. Should forbidden beverages be landed, the vessels containing them were broken and the contents were run to waste. The island, which is about five miles long and three across, is traversed with three main roads, made of course, in former years, by convict labour; smaller roads also branch off to the various outlying farms and hamlets. The scenery is much like that of a large and well-wooded English park. The long native grass, which proved famous pasturage for cattle, was very abundant, whilst a great variety of

fruits—the orange, lemon, banana guava, melon and peach—were to be had for the picking.

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#### HARVEST HYMN.

BY THE REV. CANON FLEMING, CHAPLAIN-  
IN-ORDINARY TO THE QUEEN.

Lord of the harvest, hear our praise,  
A hymn of grateful joy we raise  
To Thee, whose ever-bounteous hand  
Has crowned with harvest-tide the land.

Thy goodness marks the rolling year,  
Thy gracious love is ever near;  
Lord, let the fruit of charity  
Be gladly rendered back to Thee.

We thank Thee for the power and will,  
Some corners of Thy field to till;  
Oh, purify our hearts that we  
May give ourselves, O Lord, to Thee.

When in a world of light and love,  
We keep the harvest-home above;  
Let none, O Lord, be missing here,  
Of all who now are gathered here.

*Girl's Own Paper.*

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#### HIGH SCHOOL SECTION.

TO show how the scheme for a College of Preceptors stands, we give space to the following:

##### COLLEGE OF PRECEPTORS.

Wednesday morning.

Mr. A. MacMurphy presented the report of the Committee on College of Preceptors for Ontario. It recommended:—(1) The organization of a College of Preceptors consisting of (a) Associates, equal in standing to third class teachers; (b) Licentiates, equal in standing to second class teachers; (c) Fellows, equal in standing to first class teachers; and (d) graduates who are masters engaged in teaching or inspecting. (2) The management and control of the affairs of the college to be in the hands of the members thereof. (3) The entrance fee

for associate, licentiate and fellow, to be respectively \$— (4) All professional teaching and examinations to be made under the control of a College of Preceptors. (5) Fees to be charged all students attending the Normal Schools for the support of those institutions. (6) A chair for the discussion of all questions affecting education to be established in the University of Toronto. (7) An effort to be made to enter into an arrangement with the Government in regard to the appointment of examiners for non-professional departmental examinations.

In the Association the following motion was adopted with very few dissentients:

Mr. H. I. Strang moved, seconded by Mr. MacMurphy:—“(1) That this Association expresses its approval in

general terms of the principle of the scheme, as set forth in the first paragraph (1. Its aims, broadly stated, should be to promote sound learning and to advance the interests of education by admitting to the teaching profession only those who are fitted for the work, to improve the position of the profession, and to protect the public from incompetent teachers), proposed by Mr. Dickson; but, recognizing the necessity for a fuller consideration of the details, agrees to have his paper printed and sent down to the various local associations, with the request that they will consider it and report to the General Secretary any action taken by them in regard to it; (2) that a committee, to be named by the president, be appointed to collate the results as received by the Secretary, and lay them before the Association for consideration at its next annual meeting."

*Editor of THE MONTHLY :*

SIR,—As the Second Class Algebra paper set at the recent examination of teachers has provoked a good deal of criticism, it may, perhaps, interest your readers to see Mr. Glashan's solutions of the questions, with some notes which he has added. The questions have been called "cranky." Nothing can be further from the truth than such a statement. The ninth question is an exercise, with nothing

peculiar about it, in the formation of equations; the others, without exception, are applications of the broadest principles of elementary algebra.

When the paper was handed to me as Chairman of the Central Committee, it did not strike me as being too difficult. Nor do I yet think it too difficult for second class teachers prepared as they ought to be. But I admit that I was wrong in supposing that it was suitable for the candidates coming up for examination; it has, in fact, been found to be out of the reach of the great majority of them. I need not say how much I regret this error of judgment on my part. I will do what I now can to prevent any candidate from being injuriously affected thereby.

I am, sir,

Your obedient servant,

GEO. PAXTON YOUNG.

26th July, 1886.

WE gladly give space to the letter kindly sent to us by the Chairman of the Central Committee of Examiners. Mr. Glashan's notes will appear at the proper time. We thank him for his solutions; however, before we received them, a member of our editorial staff had solved the questions. It does appear to us remarkable that even the Chairman of the Central Committee would take the liberty of charging the mathematical masters of Ontario with being either incompetent or inefficient.—ED. C. E. M.

## EDITORIAL.

### VACATION.

THE MAGAZINE will reach the teachers at the end of their summer holidays. THE MONTHLY goes into solitude with the "army of light," and buckles on the harness as they do for the academic year. The teacher, while off duty, endeavor

in various ways and in divers places to freshen the body, to replenish the store of nervous energy and mental health, and so return to the schools with cheered hearts and buoyant spirits. These things are indispensable to bright, hopeful, successful work in the school-room.



Teaching is not a mechanical employment to be gauged by hours and days, and the number of pages in a text book, but to be estimated by the informing and vitalizing impressions made upon the growing intellect and ingenuous souls of the young, who are trustingly under the teacher's guidance groping their way from the known to the limitless unknown. Thus we lead our many bands into the boundless fields of God's own truth. Mental pursuits cannot be rightly measured by a manual labour standard. Unlike things are not governed by the same laws. Muscle and brain are not like, and are widely different in their mode and results of action. Unlike operations should not be subjected to the same kind of value.

The scholars also reap a rich benefit from the teacher's recreation. Its reflex influence upon the school is direct and positive, and converts the legal right into a professional duty. The teacher should return with a clear head, steady nerve, cool judgment and kindly temper—conditions which exert a very wholesome influence upon the dispositions of children, their aptitude for study, and their ability to make good progress while in attendance at the schools. We congratulate all the teachers upon whatever relaxation they may have secured, and truly hope that they return to their onerous and hopeful work with an assured pledge of the highest profit to the country and of receiving "their reward."

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#### THE ONTARIO TEACHERS' ASSOCIATION.

**T**HE Annual Convention of the Association held this year will be a memorable one for various reasons, but chiefly for the introduction and discussion of the question, "the formation of the College of Preceptors." This question took tangible

shape during the annual convention last year by the appointment of a committee in the High School Section of the Association. In order that our readers may have a full account of what was done, we publish in this number the report of the committee. Along with Principal Dickson's paper, read before the Association, and the motion adopted therewith, we commend to the favourable consideration of the educators and instructors of our country this important matter, in the earnest expectation that substantial progress will be made during the year for the visible organization of the teachers of the country into an acknowledged profession.

Much valuable work was accomplished in the different sections, in which the questions proposed at the late Departmental Examinations were very carefully considered. Some of the papers were universally condemned, just as fully as they have been condemned by the country. Several remedies were proposed for an evil which is admitted to exist by almost every teacher. Generally speaking, the attendance at the various sessions of the Association was good, the exception to this being that of Thursday, when the number was small, especially after the election of the officers of the Association in the afternoon. Any one who attended the Convention of 1886 had an opportunity of getting at least a fair impression of the teachers of Ontario.

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#### HIGHER EDUCATION OF WOMEN.

**T**HE Holloway College for the higher education of women at Mount Lee, Egham, England, was opened by the Queen on the last Wednesday in June. It is about ten years since the late Mr. Thomas Holloway resolved to take upon himself the whole cost of building and endowing this college, which is in-

tended to form the nucleus of a university. The site on which the college stands consists of ninety-five acres, and the total outlay has been £600,000, exclusive of £300,000 left by the benefactor for the completion and endowment, no expense having been spared to render all the arrangements as complete as possible.

Two long blocks of buildings forming two sides of the quadrangle will be devoted to academic purposes; in the connecting blocks are the chapel, recreation hall, dining hall, kitchen (to be used as a school of cookery), museum, library, music rooms, lecture theatre, etc. The chapel is elaborate in design and ornate in decoration; the recreation room forms a gallery for pictures which Mr. Martin Halloway has collected at a cost of £90,000; there is also a tennis lawn and other provisions for recreation in the open air. The building contains 1,000 rooms, and affords accommodation for 250 students and for a large staff of professors. To each student will be allotted a bedroom and a study, and there will be a common room for every six students, where they will be able to associate for conversation and amusement.

It was intended by the founder that the college should be mainly self-supporting, and this intention

will be carried out by the governors. In the deed of foundation it is stated that the founder desired that power should ultimately be sought enabling the college to confer degrees on its students after proper examination. Until such power is obtained it is intended that the students shall qualify themselves to take their degrees at the University of London, or at any other university where degrees may be obtained by them. The deed also states that "the curriculum of the college shall not be such as to discourage students who desire a liberal education apart from the Greek and Latin languages; and proficiency in classics shall not entitle students to rewards of merit over others equally proficient in other branches of knowledge." No student will be admitted to the college who has not passed the age of seventeen, and who has not passed a satisfactory examination; and the student's residence, except in special instances, will be restricted to four years.

The *Educational Times* directs attention to the fact that in selecting the board of governors no recognition is made of educational men (with the exception of the Archbishop of Canterbury), and expresses the hope that this defect will be remedied in the college faculty being represented on the Board or in some other way.

PEAS are of Egyptian origin. Celery originated in Germany. The chestnut came from Italy. The onion originated in Egypt. The nettle comes from Europe. Tobacco is a native of America. The citron is a native of Greece. The pine is a native of America. Oats originated in North Africa. Rye originally came from Siberia. The poppy originated in the East. The mulberry originated in Persia. Parsl-y was first known in Sardinia. Spinach was first cultivated in Arabia. The sunflower was brought from Peru. The walnut and peach came from Persia. The horse chestnut is a native of Thibet.

A FRENCH paper gives some information about the submarine cables of the world. Nearly all the lines under the sea have been made by English workmen, bought with English money, and laid down by English engineers. The capital of the three companies reaching from London to the countries of the East represents more than 31,000 miles of submarine cables. The English companies own 13,000 miles, against 10,000 miles owned by others of the cables between Europe and America. Not more than a tenth of the 12,000 miles of cable connecting Europe and Brazil with the West India Islands is owned outside of Great Britain

## SCHOOL WORK.

## CLASSICS.

G. H. ROBINSON, M.A., TORONTO, EDITOR

## BRADLEY'S ARNOLD.

BY M. A.

## Exercise 36.

1. Utrum servi futuri sitis an liberi vestri ipsorum est arbitrii. 2. Scimus cujusvis esse errare, sed stulti est illud oblivisci, aliud esse errare, aliud in errore perseverare. 3. Omnium civium jura ac libertatem spe sua celerius sui juris fecit. 4. In diem vivere, nihil in futurum providere, barbarosum potius quam civitatis liberæ esse dixit. 5. Patris tui æquales suos esse dixit, nec eorum quenquam sibi avunculo tuo cariorem fuisse. 6. Omnia tua causa atque fratris, tui, hominis optimi, absens facere non destiti. 7. Tempori, inquit, cedere prudentis est; sed ejusmodi minarum rationem habere summæ est stultitiæ. 8. Utrum vicerimus, necne, vix ausim dicere; scio *militis esse* jussa expectare ducis. 9. Leges scribere, ac ferre, aliorum erit; nostrum est legibus parere. 10. Legi quam ipse pertulisses, fraudem te facere dixit; id quod evertendæ esse reipublicæ credidit.

## Exercise 43.

1. Quod tantum beneficium tibi potissimum liberisque tuis secundum Deos acceptum rettuli. 2. Spero eum cum Romam pervenerit apud me commoraturum esse. 3. Hic annus ad interitum civitatis fatalis esse videtur. 4. Plerique eum extra culpam esse credunt; nec quisquam talem tamque bonum civem contra rempublicam quidquam facturum fuisse putat. 5. Aciei ultra Danubium instruxit; nostri vero qui jamdudum aliquantum temporis secundum flumen iter faciebant prope alteram ripam adversus hostium castra constiterunt. 6. Per me tibi licuit Londinum ad tuos domum redire, utrum abieris necne penes te est. 7. Illud

inter te ceterosque interest; apud illos hic propter tot ejus in rempublicam merita permultum, apud te propter hanc ipsam causam plane nihil valet. 8. Filium tuum videtur ille ad cœnam in tertiam diem apud se invitasse; ex eo tempore nemo eum amicorum videt usquam. 9. Jam in terram expositi erant hostes, et intra telorum jactum venerant; nostri pila conjicere, et inter illos ac flumen præterire conari. 10. Tanta fuit eorum in præsens lætitia, tanta in futurum spes, ut nemo quid re vera fieret suspicatus sit. 11. In me ille vehementissime invectus consedit; cujus ego adversus longissimam orationem perpauca dixi. 12. Arbores quæ multæ proceræque circa viam stabant præterectus, tandem juxta portam constitui.

EDUCATION DEPARTMENT,  
ONTARIO.

MIDSUMMER EXAMINATIONS, 1886.

Second Class Teachers.

EUCLID.

Examiner—J. Dearness.

NOTE — Contractions and symbols, except of operation, may be employed. Use capital letters on the diagrams. It is recommended that every step in the demonstration should begin on a new line, and references and authorities be placed opposite in the margin.

1. If two triangles have two sides of the one equal to two sides of the other, each to each, and have likewise their bases equal; the angle which is contained by the two sides of the one shall be equal to the angle contained by the two sides equal to them of the other. [8.]

Two triangles have two sides of the one equal to two sides of the other, each to each, and an obtuse angle, not contained by the respectively equal sides, equal in each; then must the two triangles be equal in all respects. (Apply I., 26.) [8.]

2. To make a triangle of which the sides shall be equal to three given straight lines, but any two of these must be greater than the third. [8.]

Given the three lines equal why can not the construction of this proposition be substituted for that of I., 1? [2.]

To construct a triangle having given the base, one of the angles at the base, and the sum of the other two sides. (Apply I., 23.) [8.]

3. If a straight line be divided into two equal and also into two unequal segments, the rectangle contained by the unequal segments together with the square on the line between the points of section is equal to the square on half the line. [8.]

The square on either of the sides about the right angle of a right-angled triangle is equal to the rectangle contained by the sum and difference of the hypotenuse and the other side. [9.]

Give an algebraical demonstration of this deduction. [2.]

4. In obtuse-angled triangles, if a perpendicular be drawn from either of the acute angles to the opposite side produced, the square on the side subtending the obtuse angle is greater than the sum of the squares on the sides containing that angle, by twice the rectangle contained by the side upon which when produced the perpendicular falls, and the straight line intercepted without the triangle between the perpendicular and the obtuse angle. [9.]

The sum of the squares on the diagonals of a parallelogram is equal to the sum of the squares on its four sides. (Apply II., 12, 13.) [9.]

5. From the hypotenuse of a right-angled triangle segments are cut off equal to the adjacent side, show that the square on the middle segment is equal to the rectangle contained by the extreme segments. Show also how this theorem may be used to find a series of numbers expressing the sides of right-angled triangles. [10.]

6. To draw a straight line from a given point which shall touch a given circle. [8.]

What case of this problem is impossible? [2.]

6. An angle in a semi-circle is a right angle; an angle in a segment greater than a semi-circle is less than a right angle; and an angle in a segment less than a semi-circle is greater than a right angle. [9.]

Third Class Teachers.

ARITHMETIC.

Examiner.—J. C. Glashan.

1. *A* had \$7 less than *B* had, and *B* had \$10 less than *C* had. *A* gave \$5 to *B* and \$12 to *C*. How many dollars had *C* more than *A* then? [16] *Ans.* \$46.00.

2. One-quarter of the time which a man spent on a journey from *M* to *T* he travelled by steamboat at an average rate of 14 miles an hour; two-thirds of the time he travelled by railway-train at an average rate of 25 miles an hour; and the remaining hour of the time he rode the remaining 7 miles of his journey. Find the distance from *M* to *T*. [16] *Ans.* 249.

3. At what time between 4 and 5 p.m. is the minute-hand exactly two minute-spaces ahead of the hour-hand of a watch marking correct time? [16] *Ans.* 24 minutes.

4. A man, assisted part of the time by a boy, completed a job in 15 hours. The man received five-sixths of the pay and the boy received one-sixth, but the man was paid at double the rate the boy was, in proportion to the amount of work each did. How long would the man unassisted have taken to accomplish the work? [16]

*Ans.* 22½ hrs.

5. How much water must be added to a mixture of 15 gal. of vinegar costing 52 ct. the gallon and 13 gal. costing 40 ct. the gallon, that \$5 may be gained by selling the whole at 15 ct. the quart? [16]

*Ans.* 2 gals.

6. A total of 250 marks is to be allowed to a paper of 10 questions. To the first 7 questions the average is given. Divide the remaining marks so as to allow 7 marks to the tenth question and 5 marks to the ninth for every 3 marks allowed to the eighth. [16]

*Ans.* 35, 25, 15.

7. A bookseller charges on certain books 35 ct. on the shilling of the published price and gives a discount of 35 per cent. What is the actual rate he charges on the shilling? [16]

*Ans.* 22 $\frac{3}{4}$  cts.

8. A bill of \$253.03, dated 7th October, and payable at London in 3 mos. from date, was discounted in Toronto on 20th October, the discount being at the rate of 9 per cent. per annum and 45 ct. being charged for exchange. Find the proceeds of the bill. [16]

*Ans.* \$247.56.

9. A cubic foot of water weighs 62.246 pounds and a gallon of water weighs 10 pounds. How many gallons will a cylindrical cistern of 5 ft. diameter by 4 ft. deep hold? [16]

*Ans.* 490.49 gals.

#### PRINCIPLES OF READING AND ORTHOEPY.

*Examiner.*—J. Dearness.

1. Show all the different meanings the following sentence may have according to the different positions of the emphasis:

*Did you see your brother to-day?* [6]

2. "Hallo, driver! Take a passenger?" shouted he.

"Room on top!" answered the driver.

Up mounted David and bowled away merrily.

Distinguish between pitch and force; illustrate the distinction by reference to the above example. [6]

Mark inflections on "Hallo," "driver," "passenger." [3]

3. Who does not venerate the chief of 1 that illustrious family, who, being stricken by misfortune, wisely and greatly turned his attention to "coals,"—the accomplished, the epicurean, the dirty, the delightful 5 Micawber? I may quarrel with Mr. Dickens's art a thousand and a thousand times: I delight and wonder at his genius; I recognize in it—I speak with awe and reverence—a commission from that Divine 10 Beneficence whose blessed task we know it will one day be to wipe every tear from every eye.

(a) What difference, if any, do you make in reading "who" (l. 1) and "who" (l. 2);

"thousand" and "thousand" (l. 7): and "every" and "every" (l. 12, 13)? [6]

(b) Mark the modulations of the voice heard in reading "the accomplished, the epicurean, the dirty, the delightful Micawber." [5]

What difference in the stress on "dirty" and on "delightful"? [2]

(c) Point out the phrases and clauses in the extract that should be read in different time and pitch from those of the context; also the examples of emphasis by contrast. [3+2]

(d) How do you show, in reading, the connection between "recognize" (l. 9) and "commission" (l. 10)? How would you avoid connecting "commission" with "to wipe" (l. 12)? [4]

4. Farewell! farewell! but this I tell  
To thee, thou Wedding Guest!  
He prayeth well who loveth well  
Both man and bird and beast.

He prayeth best, who loveth best  
All things both great and small;  
For the dear God who loveth us,  
He made and loves them all.

(a) Mark by vertical lines the pauses in the first stanza. [4]

(b) What differences should be made in reading lines 3 and 5. [3]

(c) Distinguish between emphasis and stress, and illustrate by reference to these stanzas. [8]

5. Divide the following words into syllables, accentuate, indicate the sounds of the vowels and italicized consonants:—

Epicurean, finances, amenable, levee, chivalrous, pedagogy, usury, deficit, Mogul, misanthropic, leisurely, posthumous. [18]

NOTE.—In indicating the sounds of letters the candidate is recommended to use phonetic spelling. If he uses diacritical marks other than the long (—), short (˘), and obscure (·), he must give the key to such other marks (60 marks will be counted a full paper.)

## GEOGRAPHY.

*Examiner.*—J. J. Tilley.

NOTE.—Candidates will take only 6 questions, but of these the first and sixth must be two. Questions of equal value.

1. Mention the different causes which affect the climate of a country, and give the effect of each.

2. Account for dew, fog, rain, glaciers, icebergs, land and sea breezes.

3. Draw an outline map of the Province of Ontario and locate (1) The Northern and Northwestern Railway System, (2) The C. P. Railway from St. Thomas to Ottawa, (3) Smith's Falls, Gravenhurst, Callander, Picton, Rice Lake, Walpole Island, Severn River, L'Orignal, Sandwich, Walkerton.

4. Where are the following and for what are they noted in history: Quebec, Queenston Heights, Richmond, San Salvador Island, Khartoum, Elba?

5. (i.) Define: Oblate Spheroid, Zodiac, Summer Solstice, Vernal Equinox, Neap Tide, Celestial Equator.

(ii.) Give the position of the Circle of Illumination at the time of the Autumnal Equinox.

(iii.) What is the length of the night in the North Frigid Zone at the time of our Winter Solstice?

6. Name the principal commercial and manufacturing emporiums of Great Britain and Ireland, and state for what each is especially noted.

7. Where and what are San Juan, Juan de Fuca, Belize, Miquelon, Three Rivers, Valparaiso, Cotopaxi, Barbadoes, Hecla, Minch, Lomond, Thanet, Menai, Arran, Saone, Basle, Samarcand, Deccan, Batavia, Magdala?

8. Give the form of government and the principal occupations of the people in four of the following: France, Nova Scotia, Norway, Belgium, Scotland, Pennsylvania.

## HISTORY.

*Examiner.*—Jas. F. White.

NOTE.—Answers should be concise. Only six questions are to be attempted, of which 8 and 9 must be two.

1. Give some account of the origin, character and civilization of the Normans. Show the chief results of their conquest of England. [16]

2. What are the principal provisions of the Magna Charta and of the Habeas Corpus Act? State why, and under what circumstances, each was obtained. [16]

3. Show how the various races in England became fused into one nation. [16]

4. Write a paper on the condition of the English working classes during the Middle Ages, and state any efforts made to alleviate their condition. [16]

5. What were the chief characteristic ideas of the contending parties in the civil war of the 17th century? Describe the great effects of this war upon the liberty and social life of the people. [16]

6. Show the state of affairs that led to the bringing in of the Reform Bill in the reign of William IV. State the feeling of the country towards it, and the changes it effected. [16]

7. Give a concise account of literature in England under Queen Victoria, with especial reference to the life, work, and influence of Macaulay. [16]

8. Give a brief history of Canada from the conquest by England to the Union in 1841. [18]

9. From what sources are the Dominion and the Provincial revenues, respectively, derived, and for what purposes are they expended? [18]

## ENGLISH LITERATURE.

*Coleridge.*

*Examiner.*—John Seath, B.A.

1. Designate by appropriate titles the chief word-pictures in the *Ancient Mariner*, following the order in the poem. [8]

2. Her beams bemocked the sultry mair,  
And I blessed them unaware.

(a) Develop fully the force of the following: "bemoaned the sultry main, like April hoar-frost spread," "The charmed water burnt away a still and awful red," "the elfish light fell off in hoary flakes," "A spring of love gushed." [3 × 4 = 12]

(b) Account for the difference between the colouring of the word-picture in ll. 6-10 and that in 11-15. [3]

(c) Explain the relation of ll. 16-21 to the development of the plot of the poem. [3]

(d) Quote the word-picture that forms the contrast to that presented above; and, by means of the above extract, illustrate Coleridge's statement: "We in ourselves rejoice." [5 + 5]

3. Around, around, flew each sweet sound,  
Singeth a quiet tune.

(a) What are we to understand by the motions described in ll. 1-4? [3]

(b) Contrast the language of l. 1 and l. 3, and show how l. 4 is related to what follows. [4 + 2]

(c) Ll. 5-9 are intended to describe what the sounds were like: account for the way in which the poet accomplishes his purpose: account also for the tense-form of "is," l. 12. With what are "a-dropping" and "all little birds" connected in sense? What explanation does the poet himself give of "their sweet jargoning"? [3 × 5 = 15]

(d) Explain the exact meaning of "heavens" and "mute," l. 13. [3 + 3]

(e) Develop the significance of the comparison in ll. 16-19, as expressed by "hidden," "In . . . June," and "That . . . tune"; commenting on the sound of the words in ll. 14-19. [8]

(f) How does the context of the poem emphasize the beauty of the above extract? [3]

4. The Sensual and the Dark rebel in vain,  
O Liberty! my spirit felt thee there.

(a) Give briefly, without the poet's amplification, the meaning of this passage, and show its relation to the rest of the ode to which it belongs. [10]

(b) Explain the biographical and historical

references, so far as is necessary for the comprehension of the author's meaning. [8]

(c) Give the force of "boastful name," "harp," "subtle," "that," l. 15, and "Yes." [2 × 5 = 10]

(d) By paraphrasing, explain the meaning of "But thou . . . power," ll. 7 and 8; and "And shot . . . love," ll. 19 and 20. [3 × 2 = 6]

(e) Distinguish the meanings of "servants," "slaves," and "minions"; "verge" and "edge"; and "surge" and "foam." [2 × 3 = 6]

(f) Show that the ode is a proper vehicle for such thoughts and feelings as are expressed above. [3]

### Macaulay.

But neither the culprit nor his advocates attracted . . . the powers of a race of men among whom he was not the foremost.

1. What is the main subject of this paragraph? What are the chief subordinate subjects? [5]

2. Show how, in the above extract, the author observes the principles that govern the construction of a paragraph, with especial reference to its (a) unity, (b) continuity, and (c) variety. [8]

3. Account for the reference to the culprit and his accusers in the first sentence. [2]

4. Account for the order of the personal descriptions. [5]

5. Why does Macaulay consider it especially necessary to explain the absence of Pitt and Lord North? [2]

6. Why are the names of Windham and Earl Grey introduced each after the description of the man himself? What name is given to this device? [3 + 1]

7. Show, in each case, the effect of the repetition of "his," ll. 13 and 14; "English," l. 19; "There," ll. 18, 19, and 24; and "British," ll. 37 and 38; and of the use of "the ingenious, the chivalrous, the high-souled," ll. 27 and 28; "unblemished," l. 35; and "culprit, advocates, accusers," l. 39. [2 × 7 = 14]

8. Explain the exact significance of the description, "the English Demosthenes and the English Hyperides." [4]

9. Criticise the form of ll. 19-24. [2]

10. Contrast the effect of the last sentence in the above extract with that of the following one, accounting for Macaulay's use of the additional particulars :

*But those who, within the last ten years, have listened, till morning in the House of Lords, to the eloquence of Earl Grey, can form an estimate of the powers of men some of whom were better than he.* [8]

11. By reference to "illustrious," l. 7; "urbanity," l. 14; "reverentially," l. 24; "delegates," l. 37; and "animated," l. 44; show how light may be thrown upon the exact meaning of a word (a) by means of its etymology, and (b) by distinguishing it from its synonyms. [2 × 5 = 10]

12. Give the terms that describe the style of the above extract, and explain their application. [4]

13. Illustrate from the above extract the characteristics of Macaulay's style (a) which writers should imitate, and (b) which they should avoid. Give in each case the reasons for your opinion. [6 + 3]

ENGLISH GRAMMAR.

1. Explain the nature of the words in the following that are not distinctly classifiable as one or another of the seven parts of speech used to express our thoughts :

Yes; certainly. Why, surely there is no one who will say that when the struggling people are attempting to secure their rights, you would deprive them of the opportunity of doing so. [15]

2. Make a list of the inflections of the personal and the demonstrative pronouns, and illustrate by one example of each inflection, the uses of these inflections in the expression of our thoughts. [8]

3. Classify, on the basis (a) of meaning, and (b) of form, the following adjectives and adverbs :

*Cleanly, well, what, late, each, all, forty, always, fourthly, forward, ponderously, sideways, already, slovenly, most.* [10]

4. Explain the force of the italicized verbal forms in the following extract :

*He. I shall go to town to-morrow. Of course you will ?*

*She. No, thanks. I shall not go. I shall wait for better weather, if that will ever come. When shall we have three fair days together again ?*

*He. Don't mind that. You should go. I should like to have you hear Ronconi.*

*She. No, no; I will not go.*

*He (to himself). But you shall go, in spite of the weather and yourself.*

*(To her.) . . . Do come; you will enjoy the opera; and you shall have the nicest possible supper at Delmonico's.*

*She. No; I should not enjoy the opera . . . I wouldn't walk to the end of the drive for the best supper Delmonico ever will cook.* [15]

5. Distinguish the following (1) as to meaning, and (2) as to grammatical construction :

(a) The eye which sees all things, sees not itself.

The eye, which sees all things, sees not itself.

(b) Oh shame! where is thy blush? O Shame, where is thy blush?

Oh, shame! where is thy blush? Oh, Shame, where is thy blush?

[2 × 6 = 12]

6. Still onward winds the dreary way ;

To shroud me from my proper scorn.

(1) Classify, and explain the relation of. the clauses in ll. 2-4 and 9-16. [16]

(2) Classify, and explain the exact construction of the italicized words. [2 × 8 = 16]

(3) Explain the use of the mood-forms in ll. 4, 9, and 14, and of the tense-form in l. 5. [3 × 4 = 12]

(4) Why is the inflection of "watches," l. 5, different from that of "hath," l. 6? [3]

(5) Analyze each of the following, giving the force of the several parts :

"Onward," "winds," "whatever," "goodness," "mouldered," "indeed," "foresee," and "waiting." [2 × 8 = 16]

7. Correct any errors in the following, giving in each case your reason :

(a) It is our belief that as many or even more University men will be found in the



ranks of this profession than in either medicine, law or divinity. [6]

(b) We are at the outset met with the special peculiarity that in the case of each of the other three professions each of them has the exclusive right to say what are to be the terms of admittance. Has this profession any say as to admission? Not a word more than any member of the community. [6]

(c) It is not necessary that we should point out the results which are sure to follow the adoption of the practice to which we have referred without some safeguard. [3]

(d) The objection is frequently made to reading the Koran, that the lessons are read in an indifferent, mechanical, careless style, and therefore they had better not be read; but let the unconscious influence of the preceptor's character be free to do its work. [9]

(e) Not only is the attempt made by it to ascertain who are prepared to begin the course but also to show how the subjects should be taught. [3]

#### MENTAL ARITHMETIC.

*Examiner*—J. J. Tilley.

#### Questions of equal value.

1. If  $3\frac{3}{4}$  yds. cost \$21.60, what will  $5\frac{1}{2}$  yds. cost?

2. If 6 horses eat 54 bus. of oats in 6 weeks, how long will 720 bus. last 8 horses?

3. Find the interest on \$12,000 for 6 years and 10 months at 6 per cent. per annum.

4. The numerator of a fraction is  $33\frac{1}{2}$  per cent. more than the denominator, and the sum of both is 434; find the fraction.

5. A can do a piece of work in 30 days which B can do in 25, C in 20, and D in 15 days. In what time will they do it working together?

6. Divide \$1,860 between two persons in the proportions of  $\frac{5}{8}$  and  $\frac{3}{8}$ .

#### DRAWING.

*Examiner*.—J. A. McLellan, LL.D.

#### *Ruling the paper.*

Divide a sheet of foolscap into three equal parts by two horizontal lines. Bisect the top and bottom divisions by a vertical line.

#### *Adjustment of work.*

Place the Freehand in the left subdivision and the Geometry in the right subdivision of the top space; the Perspective in the middle division, and the Designs in the subdivisions of the bottom space.

*Freehand.* (No perspective effect.) *Time, 15 minutes.*

Make drawings showing the size and shape of the back, side, and end of a book (say Third Reader), length to be 3 inches, width  $1\frac{1}{2}$  inches, and thickness  $\frac{1}{2}$  inch. Details of design on cover at pleasure. [20]

#### *Geometry.*—*Time, 15 minutes.*

(a) On a horizontal line 2 inches long, construct a square.

(b) On the upper side of this square construct an Equilateral Triangle.

(c) About this triangle describe a circle.

(d) Draw a tangent to any point in the circumference of this circle. [20]

#### *Perspective.*—*Time, 30 minutes.*

Height 6 feet, distance 16 feet, scale  $\frac{1}{2}$  inch = 1 foot.

(a) Place in perspective a block 2 feet square, 1 foot thick, lying on one of its square faces, having two of its edges parallel to the picture plane, and its nearer left hand corner touching the picture plane 2 feet to the left. [10]

(b) Centrally upon this block, with its edges parallel to the corresponding edges of the block, place a prism 1 foot square and 3 feet high. [10]

(c) Make the top of the prism the base of a pyramid 4 feet high. [5]

#### *Design.*—*Time, 30 minutes.*

(a) Draw a circle 3 inches in diameter, and about it describe a square. Divide the circumference of the circle into six equal parts, and join the alternate points of division by straight lines, thus forming two intersecting equilateral triangles. Represent

these triangles as being formed of bands  $\frac{1}{2}$  inch wide, and make these bands interlace.

[10]

(b) Draw two horizontal lines, each 4 inches long and 2 inches apart. Divide the space between them into contiguous equilateral triangles. Use these lines and triangles as the basis of a design for a border suitable for a wall paper. [25]

ALGEBRA.

Examiner—J. C. Glashan.

Value for each question = 10.

1. Divide  $\left(\frac{x^2}{a^2} + \frac{a^2}{x^2} - 2\right)^2$   
by  $\frac{a}{x} - \frac{x}{a}$ . *Ans.*  $\left(\frac{a}{x} - \frac{x}{a}\right)^2$ .

2. Simplify  
 $\frac{1}{4(x-1)} - \frac{1}{4(x+1)} + \frac{1}{(x-1)^2(x+1)}$   
*Ans.*  $\frac{1}{2(x-1)^2}$ .

3. Simplify  
 $\left(\frac{x+y}{x-y} - \frac{x-y}{x+y}\right) \div \left(\frac{x^2+y^2}{x^2-y^2} - \frac{x^2-y^2}{x^2+y^2}\right)$   
*Ans.*  $\frac{x^2+y^2}{xy}$ .

4. Prove that  
 $\frac{a+b}{ab} \left(\frac{1}{a} - \frac{1}{b}\right) - \frac{b+c}{bc} \left(\frac{1}{c} - \frac{1}{b}\right)$   
 $-\frac{c-e}{ce} \left(\frac{1}{c} + \frac{1}{e}\right)$  is the difference of two squares.

5. Resolve into linear factors  
 $(a^2 + bc + ca + ab)(b^2 + ca + ab + bc)$   
 $(c^2 + ab + bc + ca)$   
*Ans.*  $(a+b)^2(a+c)^2(b+c)^2$ .

6. Resolve into three factors  
 $(x^2+y)^2(x^2+z^2) - (x+z)^2(x^2+y^2)$   
*Ans.*  $2x(x^2 - yz)(y - z)$ .

7. Show that there is only one value of  $x$  that will make  $x^3 + 6x^2c + 8xc^2 + 10c^3$  equal to the cube of  $x + 2c$ , and find that value.

*Ans.*  $x^3 + 6cx^2 + 8c^2x + 10c^3 = (x+2c)^3$  ;  
*i.e.,*  $x = \frac{c}{2}$ .

8. Solve the equation

$$\frac{x-1}{x-2} - \frac{x-2}{x-3} = \frac{x-5}{x-6} - \frac{x-6}{x-7}$$

*Ans.*  $x = 4\frac{1}{2}$ .

9. Solve the simultaneous equations

$$\frac{2x-y}{1} = \frac{2y-z}{2} = \frac{2z-u}{4} = \frac{2u-x}{8} = 15.$$

*Ans.*  $x = 32, y = 49, z = 68, u = 76$ .

10. Find a number less than 100, the sum of whose digits is 12, and whose digits if reversed form a number which is greater by 6 than half of the original number.

*Ans.* 84.

EUCLID.

Examiner—J. Dearness.

NOTE—Contractions, and symbols except of operation, may be employed. Use capital letters on the diagrams. It is recommended that every step in the demonstration should begin on a new line, and references and authorities be placed opposite in the margin.

1. Wherein, if at all, are the following definitions incomplete :

An acute angled triangle is that which has two acute angles. [2]

A parallelogram is a rectilinear figure whose opposite sides are parallel. [2]

Parallel straight lines are such as being produced ever so far do not meet. [3]

2. Distinguish between a rhombus and a square. What parallelograms are not rectangles? Illustrate by diagrams. [5]

3. The angles which one straight line makes with another upon the same side of it are together equal to two right angles. [8]

What is a corollary? Give an example and demonstrate it. [7]

AB makes two unequal angles upon one side of CD; show that the bisectors of these two angles are perpendicular to each other. [7]

4. Two triangles have two angles of the one equal to two angles of the other each to each and the side adjacent to the equal angles in one triangle equal to the corresponding side of the other. Show that the two triangles are equal in every respect. [9]

Through a given point draw a straight line which shall form with two given inter-

secting straight lines an isosceles triangle. [8]

5. If a side of a triangle be produced, the exterior angle is equal to the sum of the two interior opposite angles, and the sum of the three interior angles to two right angles. [9]

If the three sides of a triangle are produced both ways, nine angles are formed outside the triangles; compare the sum of these nine angles with that of the three interior angles. [5]

Which of the nine outside angles are called exterior angles? [3]

6. To describe a square upon a given straight line. [8]

Describe the square of which AB is the diagonal. [8]

7. Construct a square equal to the sum of two given squares. [8]

The sides of a triangle are measured by 2, 3, and 4 units respectively. Show whether it is an obtuse angled triangle. [8]

#### LATIN AUTHOR.

Examiner—J. E. Hodgson, M.A.

#### A.

Translate into idiomatic English :

Insula natura triquetra, . . . Ita omnis insula est in circuitu vicies centum milium passuum. [20]

1. Parse fully: *triquetra, quo, dimidio, medio, dies, percontationibus, noctes (videbamus), tertium, huic, vicies*. [11]

2. Explain the construction of: *pari spatio, septingentorum millium, cui parti*. [6]

3. Distinguish: *lätus, lätus; alter, alius; circiter, circum; opinio, sententia; terra, patria*. [5]

4. Criticise the geographical statements contained in this extract. From what source had Cæsar obtained his information? [5]

5. Give, in your own words, the substance of Cæsar's description of the Britons' mode of fighting *ex essedariis*. [5]

#### B.

Translate into idiomatic English :

Quod ubi Cæsar animadvertit, naves longas. . . . Hoc item ex proximis

primis navibus quum conspexissent, subsequi hostibus appropinquarunt. [20]

1. Parse fully: *barbaris, constitui, nostris, retulerunt, contestatus, vultis, coepit, dedecus, subsequi, appropinquarunt*. [10]

2. Illustrate, by reference to this extract, some of the differences between an inflected language and an uninflected language, with regard to: (a) the order of words, (b) the use of prepositions, (c) the use of connectives. [6]

3. Why is the *ablative* of the participle used in *militibus cunctantibus*, and the *nominative* in *contestatus deos*? [3]

4. Derive: *barbaris, onerariis, expeditior, tormentis, genere, projecit, universi, appropinquarunt*. [4]

5. Mark the quantity of the penult in: *naves, barbaris, lätus, summoveri, modo, desilite, maris, prodere, projecit, dedecus*. [5]

#### LATIN GRAMMAR AND COMPOSITION.

1. (a) State the rules for the grammatical gender of nouns of declensions II. and IV. [2]

(b) Give the gender and the genitive, singular and plural, of: *equus, exercitus, faber, fortis, funis, impetus, jus, lätus, lis, nutus*. [10]

2. Mention any peculiarities in the declension of: *filius, filia, locus, plus, nihil, ullus*. [6]

3. Give the other degrees of comparison of: *sæpe, repente, prope, posterus, plus, exiguus*. [6]

4. Give the principal parts of: *occido, occurro, nolo, negligo, meto, moror, levo, nascor*. [8]

5. Analyze the following words, and account for their meaning therefrom: *affligo, biduum, coerceo, commeatus, coram, debeo, dimitto, dimico, incolumis, ingens*. [10]

6. Decline the following combinations: *fortis servus, tota urbs, omnis injuria, bina castra*. [4]

7. Translate into Latin :

(a) The bravery of our troops was worthy of praise. [3]

(b) Return to Rome, my son, within eighteen days. [4]

(c) Some were standing on shore, whilst others were rushing into the water. [4]

(d) Cicero was again created consul during my absence. [4]

(e) The city was captured by the Gauls and burnt. [4]

(f) On the same day the ambassadors whom the enemy had sent to Cæsar regarding peace, arrived at the camp and assured the distinguished Roman General that their countrymen would perform his orders. [10]

(g) In the consulship of Lucius Domitius and Appius Claudius, Cæsar set out from winter-quarters for Italy, as had been his yearly custom, and ordered the lieutenants whom he had placed in command of the legions, to see to the building and equipping of as many new ships as possible during the winter. [15]

(h) When Cæsar had proceeded a little further, he perceived that his men were being hard-pressed by the enemy, who had occupied a superior position, and were hurrying weapons from all directions. [10]

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DICTATION.

*Examiner*—Cornelius Donovan, M.A.

NOTE FOR THE PRESIDING EXAMINER.—This paper is not to be seen by the candidates. It is to be read to them *three times*—*first*, at the ordinary rate of reading, they simply paying attention to catch the drift of the passage; *second*, slowly, the candidates writing; *third*, for review. Maximum, 50 marks.

Of his intellectual character, the constituent and fundamental principle was good sense; a prompt and intuitive perception of consonance and propriety. He saw immediately, of his own conceptions, what was to be chosen, and what to be rejected. But good sense alone is a sedate and quiescent quality which manages its possessions well, but does not increase them, and never gains supremacy. He had likewise genius; a mind active, ambitious and adventurous, always investigating, always aspiring, always endeavouring more than it can do. These benefits of nature he improved by incessant and unwearied diligence; he had recourse to every source of intelligence, and lost no

opportunity of information. He read his compositions to his friends, and was never content with mediocrity when excellence could be attained. His method, as may be collected from his translation, was to write his first thoughts in his first words, and gradually to amplify, decorate, rectify and refine them. By perpetual practice, language had, in his mind, a systematic arrangement. He examined lines & 3 words with minute and punctilious observation, and retouched every part with indefatigable diligence. He was never elevated to negligence, nor wearied by impatience; he never passed a fault unamended by indifference, nor quitted it in despair.

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NOTES ON FOURTH BOOK LESSONS FOR ENTRANCE EXAMINATION, DECEMBER, 1886.

THE TRUANT.

*Resembled a flower.* He sought merely pleasure, not usefulness.

*Ever since Adam, etc.* Labour has been the lot of man since the fall.

*A severe and ugly countenance.* Work appearing disagreeable to children.

*Overtook a man.* Even in "trudging along the road" there is some work.

*Ingenuous.* Frank, open, candid. Distinguish from ingenious.

*Owner of the field.* Honest work having met with success.

*The more disagreeable man of the two.* Alluding to the prevailing idea that manual labour is more severe than mental.

*The laziest, and heaviest, etc.* "To have no work to do," is the heaviest labour.

*Had learned a good lesson.* What was the lesson?

THE BELL OF ATRI.

*Longfellow.* For sketch of his life see Reader, p. 105. His chief poems are "Evangeline," "Hiawatha," "Golden Legend," besides many beautiful minor poems.

*Abruzzo.* A province in Italy, bordering on the Adriatic Sea.

*Scant renown.* Little fame.

*Syndic.* The chief magistrate.

*Hempen.* Made of hemp.

*Briony.* Generally written *bryony*—a kind of wild climbing plant.

*Votive.* Given in observance of a vow.

*Spur on heel, and sword in belt.* The signs of knighthood. When a man had accomplished some deed to render him worthy of knighthood he was said to have "won his spurs."

*Forlorn.* Refers to steed not "lanes."

*Clime.* Why not "climate"?

*Accusing.* Why "accusing"?

*Reluctant pace.* Because leaving his rest.

*Arcade.* The "roof, projecting some small space."

*Of flowers . . . weeds.* Mark the contrast between "flowers" and "weeds." The application is hinted in the previous lines if we emphasize "deeds."

*Never yet . . . ear.* Why so?

*The king.* He who had the bell hung in the market-place. The "king" is not to be confused with the "syndic."

What lessons are to be drawn from this poem?

#### WORK FOR 1886-87.

Examination papers for entrance to High Schools will be set in Literature from the following lessons in the New Ontario Readers, the only series now authorized for use:

##### DECEMBER, 1886.

The Truant . . . . .	pp. 46- 50
The Vision of Mirza— <i>1st reading.</i>	" 63- 66
"    "    — <i>2nd</i> "	" 68- 71
The Bell of Atri . . . . .	" 111-114
Lochinvar . . . . .	" 169-170
A Christmas Carol . . . . .	" 207-211
The Ride from Ghent to Aix. . . . .	" 285-287
A Forced Recruit at Solferino . . . . .	" 287-288
National Morality. . . . .	" 295-297

##### JULY, 1887.

The Vision of Mirza. . . . .	pp. 63-66 and 68-71
The Death of Little Nell . . . . .	pp. 100-104
The Bell of Atri . . . . .	" 111-114
Dora . . . . .	" 137-141
The Changeling . . . . .	" 205-206

A Forced Recruit at Solferino . . . . .	pp. 287-288
National Morality . . . . .	" 295-297
The Two Breaths . . . . .	" 314-319

#### LITERATURE SELECTIONS

*For Teachers' Non-Professional Examinations, 1887.*

#### CLASS III.

*English.*—The following selections from the new High School Reader will be the subjects for examination in Literature for candidates for the Non-Professional Third Class Certificate, but the oral examination in Reading will not necessarily be confined to these selections.

#### PROSE.

<i>Advison</i> —The Golden Scales. . . . .	pp. 88- 92
<i>Goldsmith</i> —From "The Vicar of Wakefield" . . . . .	" 127-133
<i>Arnold</i> —Unthoughtfulness . . . . .	" 227-233
<i>Carlyle</i> —Death of the Protector. . . . .	" 274-282
<i>Thackeray</i> —The Reconciliation. . . . .	" 308-315
<i>Stanley</i> —Arnold at Rugby . . . . .	" 350-354
<i>George Eliot</i> —From "The Mill on the Floss" . . . . .	" 356-359
<i>Ruskin</i> —The Mystery of Life . . . . .	" 390-396
<i>Goldwin Smith</i> —England in the Eighteenth Century. . . . .	" 409-411
<i>Huxley</i> —A Liberal Education . . . . .	" 412-416

#### POETRY.

<i>Byron</i> —The Isles of Greece . . . . .	pp. 211-214
<i>Bryant</i> —To the Evening Wind. . . . .	" 272-273
<i>Longfellow</i> —The Hanging of the Crane . . . . .	" 336-342
<i>Clough</i> —"As Ships Becalmed." . . . .	" 346-348
<i>Tennyson</i> —The Lord of Burleigh. . . . .	" 370-372
"    —The Revenge . . . . .	" 373-377
<i>Matthew Arnold</i> —Rugby Chapel. . . . .	" 401-407
<i>Swinburne</i> —The Forsaken Garden . . . . .	" 422-424
<i>E. W. Gosse</i> —The Return of the Swallows . . . . .	" 437-438

*Latin:* *Cesar.*—Bellum Britannicum.

*French:* *Lamartine.*—Christophe Colombe, XXV.—XL.

*German:* *Das Kalte Herz* (From *Das Wirtshaus im Spessart*) in Pitt Press Series,

or pp. 1-37, l. 15, Williamson & Co.'s edition.

CLASS II.

*English: Thomson.*—The Seasons—Autumn and Winter.

*Southey*—Life of Nelson (last three chapters).

*Latin: Cæsar.*—Bellum Britannicum.

*Cicero.*—In Catilinam, I.

*Virgil.*—Æneid, I.

*French: Lamartine.*—Christophe Colombe.

*German: Hanff.*—Das Kalte Herz.

*Schiller.*—Der Gang nach dem Eisenhammer.

CLASS I.

Grade C.\*

*English: Thomson.*—The Seasons—Autumn and Winter.

*Southey.*—Life of Nelson (last three chapters).

\* The Selection from Shakespeare prescribed by the University is the play of Timon of Athens, but this is not prescribed here, pending an application made by the High School masters for a change.

Grades A and B.\*

*Chaucer.*—Prologue and the Nonne Prestes Tale.

*Milton*—Paradise Lost, B II. Sonnets and Epitaph on Shakespeare.

*Pope.*—Prologue to the Satires.

*Wordsworth.*—Ode on the Intimations of Immortality.

*Tennyson.*—Guinevere and The Passing of Arthur.

*De Quincey.*—The Confessions of an English Opium Eater.

*Macaulay.*—John Milton.

The following editions of the above are mentioned for the information of candidates: *Chaucer, Milton and Pope*, Clarendon Press.

Candidates are recommended to consult the following books of reference: Dowden's Mind and Art of Shakespeare, or Gervinus' Commentaries, or Hudson's Life, Art and Characters of Shakespeare; English Men of Letters Series, Stedman's Victorian Poets, Hutton's Literary Essays, Minto's Manual of English Prose Literature.

CONTEMPORARY LITERATURE.

HANDBOOK OF ENGLISH HISTORY. Boston: Lee & Shepard. 614 pp. \$1.20.

The lectures of the late M. J. Guest, delivered before the College for Men and Women in London, eloquent and original in their style, are remarkable for their serene Christian spirit—full of sympathy for the oppressed, full of faith in the God whose arm is made bare in history and full of hope for the men and women for whom Christ died. In the form in which they were delivered, it was thought that they were scarcely suitable for use in American public schools, chiefly on account of the frequent recurrence of the pronoun "our," and the expressions of pride and gratulation, "natural," as the American editor says, "to the inheritors of English blood." We thought the great

American "nation were inheritors," etc. We think we have heard some of them say so. Mr. Underwood, the American editor, has rewritten and completed the lectures, and added an interesting and pleasant sketch of modern English literature, eminently suited for High School students. We have had much pleasure in examining the book.

I. NUMBERS ILLUSTRATED. By A. J. Rickoff and E. C. Davis. 160 pp.

II. NUMBERS APPLIED. By A. J. Rickoff. New York: D. Appleton & Co.

The titles of these two works on arithmetic outline the character of the books. The former is profusely illustrated, and serves to show how a knowledge of number may be imparted in the language, drawing and

reading lessons of a primary school. The latter is a complete arithmetic for secondary schools, and contains a large number of good problems.

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LIPPINCOTT'S POPULAR SPELLING BOOK.  
Philadelphia: J. B. Lippincott & Co.

The words are carefully selected and arranged, and the book well adapted for use in schools.

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CLASSICS FOR CHILDREN. 109 pp.

ADVENTURES OF ULYSSES By Charles Lamb. Boston: Ginn & Co.

Another good book of a good series.

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HOLD UP YOUR HEADS, GIRLS. By Annie H. Ryder. 197 pp. \$1.00. Boston: D. Lothrop & Co.

A really good book for girls. A sympathetic, womanly, sensible, kindly book—a book with a purpose which it bids fair to fulfil, because the girls everywhere will like it. Here are the headings of some of the chapters, "How to talk," "Moods," "How to make the most of work," "Girls and their friends."

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MESERVEY'S BOOK-KEEPING. Single and Double Entry. 222 pp. Boston: Thompson, Brown & Co.

A new edition of this well-known text book has recently been issued, in which some changes and additions are made, rendering the work more complete and valuable for use in the classroom.

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I. CIVIL SERVICE SPELLING.

II. CIVIL SERVICE BOOK-KEEPING. By William Russell, of the War Office. London: W. Stewart & Co.

The spelling book contains rules for spelling and punctuation, lists of test words with meanings, and prose extracts for dictation, all selected with care and judgment. In the latter, government book-keeping is exhaustively treated, and points of difficulty in ordinary book-keeping carefully explained and illustrated, particularly in regard to the detection of errors.

JULIUS CÆSAR. Edited by H. C. Beeding, Rector of Gattendon. 130 pp. London: Rivingtons.

An excellent edition.

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STUDIES IN GENERAL HISTORY. Teachers' Manual. 167 pp. By Mary D. Sheldon. Boston: D. C. Heath & Co.

This little hand-book is a kind of key and companion volume to the "Studies in General History," already reviewed in these columns.

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SHELDON'S SUPPLEMENTARY READING. Book third. New York: Sheldon & Co.

Accurate and interesting scientific information about sunbeams, dew, wind, fire, weight, etc., is conveyed in a clear and simple manner in this little text-book.

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SHELDON'S COMPLETE ARITHMETIC. 392 pp. New York and Chicago: Sheldon & Co.

This work on arithmetic is of an advanced character, and has been most carefully prepared by successful teachers. We are inclined to think that this fact explains the practical and well-balanced character of the book.

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HABIT IN EDUCATION. Translated from the German of Dr. Paul Radestock by F. A. Caspari. Boston: D. C. Heath & Co.

It has been said that true education is but the building up of habits, a thought which brings home a sense of great responsibility to teachers. This is one of the prominent ideas in Prof. Radestock's work, which students of mental science and many teachers will find it to their advantage to study.

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HARROW SONGS AND OTHER VERSES. By Edward E. Bowen. London: Longmans, Green & Co.

Few books have given us more pleasure than this little volume of songs, in which there is not a word but is dictated by a spirit of boyish fun and good humour, combined with right feeling and good taste. Yet there is pathos, too, notably in "An Episode of Balaclava," from which we quote—

He trod of old the hill we tread,  
 He played the games we play,  
 The part of him that is not dead  
 Belongs to us to-day.  
 When next the stranger scans the wall,  
 Where carved our heroes are,  
 Wits, poets, statesmen—show them all,  
 And then, the one Hussar.

ESSAYS ON EDUCATIONAL REFORMS. By R. H. Quick, M.A. 349 pp. \$1.00. Cincinnati: Robert Clarke & Co.

The present is a neat and serviceable edition of Mr. Quick's well-known work, which is so valuable for a teacher's library, and is perhaps more widely read than any other book on this subject.

THE ELEMENTS OF ALGEBRA. With numerous examples. By J. A. McLellan, M.A., LL.D. 328 pp. Price 75 cents. Toronto: Canada Publishing Company.

THE HIGH SCHOOL ALGEBRA. Part I. By W. J. Robertson, B.A., LL.B., Mathematical Master, Collegiate Institute, St. Catharines, and I. J. Birchard, M.A., Ph.D., Mathematical Master, Collegiate Institute, Brantford. Toronto: William Briggs, 78 and 80 King St. East, 1886. 338 pp. Price 75 cents.

OLD SCHOOL DAYS. By Amanda B. Harris. 109 pp. 60 cents. Boston: Interstate Publishing Company.

An entertaining little book, particularly to people who used to go to school in the country, to whom it will recall many scenes of their childhood's days.

INTERNATIONAL EDUCATIONAL SERIES. Vol. II. Edited by Dr. W. T. Harris.

HISTORY OF EDUCATION. By Prof. Painter, of Roanoke College, Va. 335 pp. \$1.50. New York: D. Appleton & Co.

The point of view of the author is that of the historian of civilization—sketching the educational ideals of different nations, and the educational system gradually developed by them, under the following heads:—I. The Oriental Nations; II. The Ancient Classical Nations; III. Christian Education before the Reformation; IV. Education from the Reformation to the present time.

The book is a noteworthy one, evidently the work of a scholar. The paper and printing are excellent.

HOW WE GOT OUR BIBLE. By J. Paterson Smyth, A.B., LL.B. 127 pp. London: Bagster & Sons. New York: John Wiley & Sons.

There are probably many to whom the appearance of the Revised Version suggested questions which they found it not very easy to answer, and hence the field of this little compendium was prepared for it. It is not exactly a full discussion of the subject—that would require, indeed, a very much larger volume. But it is accurate, interesting, historical and wholesome, and as such we heartily commend it.

A SHORT MANUAL OF CHEMICAL ARITHMETIC. By J. M. Coit, Ph.D., of St. Paul's School, Concord, N.H. Boston: D. C. Heath & Co.

Designed as a companion to any book on descriptive or general chemistry, this little work will be highly appreciated by students, being a valuable aid in the subject of chemical notation, qualitative analysis, etc.

CLASSICS FOR CHILDREN. Guy Mannering. Boston: Ginn & Co.

This number of the above excellent series is beautifully printed, and all necessary assistance in the way of notes, etc., is given. We have had much pleasure in examining it.

MODERN LANGUAGES IN EDUCATION. By Prof. Comfort, of Syracuse University. 40 pp. 25 cents. Syracuse: C. W. Bardeen.

A reprint of Prof. Comfort's paper on this subject, which was read before the American Philological Association in 1872, and afterwards published in *Scribner's Monthly*. It is a strong plea for modern languages, as against the ancient languages.

*Harper's Weekly* is one of the few political journals which deserve the attention of that part of the reading public who prefer reading the truth, even about political matters.



Judging from its cartoons, in which the hideousness of dishonesty in office or disobedience to law is depicted, it must be somewhat of a terror to evil-doers. The serial story, "The world went very well then," by Walter B. Sant, is at present appearing in the *Weekly*. Timely illustrations and other features of interest add to the value of this "journal of civilization."

*The School Newspaper*, which is a monthly record of news and events for home and school reading, now in its thirteenth volume, is an admirable penny-paper. The July number contains, besides the record for the month, articles upon the "Eruption of Etna," "The Finding of the Mummy of one of the Pharaoh's in Egypt," "A Description of a Cyclone," etc.; also, under the heading of "Tales and Adventures," a collection of true stories such as children dearly love. "Hard words" are explained at the foot of the articles in which they occur.

THE *Chicago Current* always contains, in addition to editorials and serials, several short stories and essays, also a number of poems. It is thus a pleasant companion. Much may be said in its favour in regard to the independence, originality and cleanness of the literature which it publishes.

*The English Illustrated Magazine* for July is an extremely entertaining number, containing, among other important contributions, a descriptive article on Charles Kingsley and Eversley, with illustrations, the author being the Rev. William Harrison. Another article on "Handwriting," with many *fac similes*, possesses much more than a passing interest. Of the illustrations it is sufficient to say that they are as good as they always are. A new

serial story by Margaret Veley begins in this number.

*The Popular Science Monthly* for August opens with a richly illustrated article of great economic value on "Woods and their Destructive Fungi," by Mr. P. H. Dudley, a civil engineer, who has made special studies for several years of the structure of the woods most commonly employed in the arts, and of the agencies which contribute to their deterioration. In "The Extension of Scientific Teaching" Professor Huxley inquires how such education may be organized so as to secure breadth of culture without superficiality, and depth and precision of knowledge without narrowness. In "A Canadian Chapter in Agrarian Agitation," Mr. George Hes gives an interesting history of land tenures in Prince Edward Island. In "Genius and Precocity" Mr. James Sully considers to what extent men who have become eminent in particular branches of art and literature have given promise in early youth of their future ability. "The Causes of the Present Commercial Crisis," which extends throughout the world, are clearly set forth by M. Paul Leroy-Beaulieu. Dr. T. M. Coan gives an account of "The Mineral Springs of Eastern France." Professor Isaac Sharpless describes the astronomical methods for obtaining the correct time. "Recent Progress in Chemistry" is reviewed in a very instructive article, and an interesting one too, by Professor H. Carrington Bolton. Dr. Arnold Schafft considers the grounds on which "The Prediction of Natural Phenomena" can be depended upon, and the classes of predictions that may be regarded as trustworthy. The relations of "The Church and State Education" are considered in the Editor's Table.

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