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Kosmos.



SCIENCE ASSOCIATION:
VICTORIA UNIVERSITY - - COBOURG, ONT.

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Kosmos (formerly *V. P. Journal*) is a monthly journal published at the beginning of each month, and is devoted to Science, Literature, Education, and the popular treatment of subjects of social, intellectual, and moral importance. It has been established and is controlled by the Science Association of Victoria University, which is composed largely of graduates, but is not restricted to either local or sectarian interests. Subscriptions may commence with any month. Extras to subscribers, 10 cents.

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KOSMOS.

VOL. III.]

SEPTEMBER, 1885.

[No. 3.

INTERPRETATION.

A DREAMING poet lay upon the ground,
He plucked the grasses with his listless hands,
No voice was near him, save the wistful sound
Of the sea cooing to the unbosomed sands.

He leaned his heart upon the naked sod,
He heard the audible pulse of Nature beat,
He trembled greatly at the word of God,
Spoken in the rushes rustling at his feet.

With inward vision, his outward sight grew dim,
He knew the rhythmic secret of the spheres,
He caught the cadence, and a noble hymn
Swam swan-like upon the gliding years.

—*Richard Realf.*

GOD hath not created anything nobler than a scholar sitting
at his writing.

EVERY great head goes to the grave with a whole library of
unprinted thoughts.

No one should laugh at men but he who right heartily loves
men.

EVERY action becomes more certainly an eternal mother than
it is an eternal daughter.

THE ENGLISH SPELLING REFORM ASSOCIATION.

THIS vigorous and scholarly Association, now in the sixth year of its existence, is gaining the ear of the thinking public. It is making itself widely felt, and has a lusty coadjutor in the Spelling Reform Association of the United States. At present it is engaged in a struggle with the Education Department of the English Government, whose conservatism is not friendly to the introduction of more enlightened scientific methods. The personal character and scholarship of the men who compose this Association must, in time, open a path for phonetic reform in the public school system. Much has already been done. The days of contempt and indifference and ridicule have passed. Various schemes are being experimented with and discussed. The question of spelling reform has become one of the living questions of the day. The last report of the American Association states that "the philologists are all in favor of reform, and no educated man, who values his reputation, cares to make active opposition." This question must now be decided on its merits. It has reached such a point that it demands a hearing, it commands respect. The platform of the Association is as follows:—

1. The existing mode of spelling the English language is a serious hindrance to education.

2. It is possible and advisable to reconstitute English spelling upon rational grounds.

3. *Such a reconstruction would rather illumine, than obscure, the history and etymology of the English language.*

4. It may be so contrived as to render existing books more accessible in their present form, and hence add considerably to their value.

5. That a reconstituted spelling would greatly abridge the time required for learning to read, both in the new and *in the present* spelling, and thus materially increase the number of readers.

6. It would thus enable much time, now wasted at school in

imparting a mastery over the present complicated vehicle of knowledge, to be applied to imparting that knowledge itself.

7. It would necessarily facilitate the received English pronunciation, both by *natives* and foreigners.

8. And it would hence tend to render universal the use of the English language, already spoken by more millions than any other on the face of the globe.

The Association is divided into three sections—the Educational, Philological and the Progressive—the object of each being, respectively, the introduction of phonetic spelling into schools, as an expeditious means of teaching children to read the present spelling; the introduction of phonetic spelling for philological, literary and general purposes; and the accomplishment of progressive reforms in the present spelling.

In order that those interested may form some idea of the *personnel* of this Association, we give the names of a few of its members, who have a more than national fame. The President is John Hall Gladstone, F.R.S. Among the Vice-Presidents are the following: Prof. Alexander Bain, of Aberdeen; Sir John Lubbock; W. W. Hunter, C.S.I., LL.D., Member of Council in India; Rev. J. P. Mahaffy, Professor in Dublin University; Isaac Pitman; Profs. Sayce of Oxford and Skeat of Cambridge; the Right Rev. Bishop of Exeter and Rev. Joseph Angus, Alfred Tennyson and Henry Sweet, M.A., and Rev. R. Morris, LL.D., Past Presidents of the Philological Society. Among the other members are found: Profs. Lounsbury, March and Child, of Yale, Lafayette and Harvard respectively; Meiklejohn, of St. Andrews; Everett, of Belfast; Whitney, Monier Williams and A. J. Ellis; and among the deceased members, Charles Darwin. Many more names might be added, but these will be sufficient.

So much interest has already been awakened in England, that one hundred and thirty School Boards, including those of Liverpool, London, Birmingham and Bradford, have sent memorials to the Education Department, praying for the appointment of a Royal Commission to report upon the advisability of spelling reform. A similar memorial has been sent to the

United States Congress, signed by forty-six American professors.

Prof. Max Müller is an enthusiastic advocate of reform. He calls our present system "the unhistorical, unsystematic, unintelligible, unteachable, and by no means unamendable spelling now current in England." When none of our educated men are perfect in spelling and pronunciation, when no Englishman can tell how to spell a word he has never seen, nor how to pronounce a word he has never heard, when in Civil Service Examinations out of 1,972 failures 1,861 were due to bad spelling, it is no wonder he asks, "Can this unsystematic system of spelling English be allowed to go on forever? Is every English child, as compared with other children, to be mulcted in two or three years of his life in order to learn it? Are the lower classes to go through school without learning to read and write their own language intelligently? And is the country to pay millions every year for this utter failure of national education?" The period, in which children learn to read and spell, is the period in which some of the most vivid and lasting mental impressions are received, yet this period is worse than wasted. The child is led through a labyrinth of confusion, which not only staggers and benumbs the young intellect, but shuts out a large amount of useful knowledge and healthful, intellectual stimulation, which might make these years of incalculable educational value. While the English child is learning to read, "the German child studies mathematics, classics and literature." The great problem of educating the masses demands this reform for its solution. If education is to remain an aristocratic luxury, let things remain as they are, but if the rich are debtors to the poor, and the highly favored to the unblest, let those who have this greatest earthly boon, the ability to read, put it within the reach of the humblest clay capable of intellectual illumination. Open the way for the millions.

To cling to our present method is as absurd as clinging to the clumsy £ s. d. instead of the decimal system. No one thinks of

advocating a return to the Roman notation in mathematics. "Add DCCXIX to MDLXVI, multiply by CCLXXXV, and divide by MDCV" is a simple problem, but not in its present form. Nevertheless we stupidly insist that no change shall be made in as clumsy a system of *ortho*-graphy, in accordance with the principles of which the letters "ghoughphtheightteaux" spell the word "potatoes," as witness the common spellings, "hiccough," "though," "phthisic," "eight," "batteaux." Well did Lord Lytton call it "a puzzle-headed delusion," yet we make it an idol too sacred to be touched, while looking with pity upon those who worship stocks and stones. We resemble the Flat-head Indians, who deformed their children's foreheads by pressing a board upon the plastic bones.

Some seem to fear that the continuity of our language will be broken, and that "all the books written during the last three hundred years will become as unreadable to the next generation as if written in Anglo-Saxon." Prof. Sayce contends that "the continuity of a language is in its sounds." It is the sound, and not the spelling, which is the principal thing, as all our metrical literature bears witness. With a phonetic spelling the laws of change can be more easily traced, and the dialects of a language can be more surely studied. A phonetic spelling would have a strong tendency to conserve the language. Nothing else can arrest the rapid changes now going on. Tennyson has had his dialectic poems printed in phonetics by that "prince of phonologists," Mr. A. J. Ellis, in order that the future generations may know how he pronounced his words. He is an ardent supporter of this reform, because he knows that without it in a few generations the music of many of his lines will be lost to his readers by the changes in pronunciation, which must inevitably occur. There is no reason why, with the almost omnipresent newspaper, our language should not be preserved as was the tongue of Thucydides and Sophocles, so that Lucian in the second century A.D. could write and speak as did the Greeks of seven hundred years before. Since before the days of Chaucer, the Italian literary language has survived unchanged. An Italian

can read his Dante with the greatest ease, while Josh Billings expresses our feeling with regard to Chaucer, "He was a good poet, but he was the worst speller I ever met." Those who are fearful for the continuity of the language might better be solicitous for its *unity*. Climate and different habits of life are making changes already, and there is danger that our language instead of being the same the world over, a bond of universal brotherhood, will break up into European, American and Australasian dialects, and we shall become like the Chinese and Japanese, able to read the same literature, but unable to converse in the same speech.

We publish the article, "Eazy az A B C," printed in what is called the first stage of the spelling reform. The second stage, in which consonants, short vowels and diphthongs are written phonetically, but "u" is used for the sounds in *but* and *put*, and "th" for the sounds in *thin* and *then*; and the third stage, in which the powers of the vowels are indicated by marks, are both illustrated below. It is impossible for us to give an example of the fourth stage, or the pure phonotypy, in which every sound has its own particular sign, since we have no type for the new characters.

Second Stage.

"DEAR SER,—An eidea woz suseded to me a fiu dayz sins, hwich, if karid into effect, wud, ei think, tend to the general gud. It iz that you shud introdus bei leter, sum of your frendz whoze teim iz not fuli okiupaid, tu uther frendz in diferent plasez, therebei establishing a korespondens between fonograferz in diferent parts of the kingdom."

Ther'd Stéj.

"On this leter the editer obzerved:—

"The sém thing woz propōzed tu ūs last yir bei anūther korespondent, hū veri properli rekomended the Jūnal az the repozitori of the adréesez ov sūch az wisht thūs tu ekschēnj eidiaz."

There are seven different schemes now before the Association and whether Isaac Pitman's is to be the triumphant one remains to be seen. With remarkable energy the veteran author is pushing its claims, and through the medium of the *Phonetic Journal*, of which he is the editor, with its circulation of 20,000 weekly, he is making it in all its stages familiar to a vast body

of readers, who, after reading a few numbers, find that it is as easy to read as the ordinary print, and that its scientific exactness adds a peculiar pleasure. It is like listening to the delicately articulated words of a polished orator. By its thorough analysis and representation of the sounds, it has a marked effect upon the reader's articulation, and by means of such spelling a universally correct pronunciation is possible. Whatever scheme is successful, there is but one verdict possible, "It must be a madman's work to be worse than our present orthography."

As Anglo-Saxons and Christians we must wish any movement success, which will facilitate the spread of the English language, and with it our civilization and religion. It is an international misfortune that a language, so well fitted as ours to be the medium of intercourse the world over, should be weighted with such a burden. "Spoken in the time of Elizabeth by a million fewer persons than to-day speak it in London alone, it now girdles the earth with its electric chain of communication, and voices the thoughts of a hundred million of souls." Spoken by such a mass of humanity spread over the whole world, only a rational system of spelling can preserve it in its entirety, and make its sounds to be ever the same familiar sounds wherever it is spoken.

LUBBOCK ON LEAVES.

WHY is there such marvellous variety in the shapes of leaves, such an inexhaustible treasury of beautiful forms? Does it result from some innate tendency of each species? Is it intentionally designed to delight the eye of man? or have the form, and size, and texture, some reference to the structure and organization, the habits and requirements of the whole plant?

I do not propose now to discuss any of the more unusual and abnormal forms of leaves, but rather to ask you to consider with me the structure, and especially the forms, of the common every-day leaves of our woods and fields.

In talking the subject over with friends, I have found a widely prevalent idea that the beauty and variety of leaves are a beneficent arrangement made specially with reference to the enjoyment and delight of man. I have, again, frequently been met by the opinion that there is some special form, size, and texture of leaf inherently characteristic of each species; that the cellular tissue tends to "crystallize," as it were, into some particular form, quite irrespective of any advantage to the plant itself. Neither of these views will, I think, stand the test of careful examination.

In the first place, let us consider the size of the leaf. On what does this depend? In herbs we very often see that the leaves decrease towards the end of the shoot, while in trees the leaves, though not identical, are much more uniform in size.

Again, if we take a twig of hornbeam, we shall find that the six terminal leaves have together an area of about 14 square inches, and the section of the twig has a diameter of .06 of an inch. In the beech the leaves are rather larger, six of them having an area of perhaps 18 inches, and, corresponding with this greater leaf-surface, we find that the twig is somewhat stouter, say .09 of an inch. Following this up, we shall find that, *ceteris paribus*, the size of the leaf has relation to the thickness of the stem. This is clearly shown in the following table:—

	Diameter of Stem in inches.	Approximate Area of six Upper Leaves in inches.
Hornbeam . . . . .	.06	14
Beech . . . . .	.09	18
Elm . . . . .	.11	34
Nut . . . . .	.13	55
Sycamore . . . . .	.13	60
Lime . . . . .	.14	60
Chestnut . . . . .	.15	72
Mountain Ash . . . . .	.16	60
Elder . . . . .	.18	93
Ash . . . . .	.18	100
Walnut . . . . .	.25	220
Ailanthus . . . . .	.30	240
Horse-Chestnut . . . . .	.30	300

In the elm the numbers are .11 and 34, in the chestnut .15 and 34, and in the horse-chestnut the stem has a thickness of .32, and the six leaves have an area often of 300 square inches. Of course, however, these numbers are only approximate. Many things have to be taken into consideration. Strength, for instance, is an important element. Thus the ailanthus, with a stem equal in thickness to that of the horse-chestnut, carries a smaller area of leaves, perhaps because it is less compact. Again, the weight of the leaves is doubtless a factor in this case. Thus in some sprays of ash and elder which I examined, of equal diameter, the former have the larger expanse of leaves; but not only is the stem of the elder less compact, but the elder leaves, though not so large, were quite as heavy, if not indeed a little heavier. I was for some time puzzled with the fact that, while the terminal shoot of the spruce is somewhat thicker than that of the Scotch fir, the leaves are not much more than $\frac{1}{3}$ as long. But may this not perhaps be due to the fact that they remain on more than twice as long, so the total leaf area borne by the branch is greater, though the individual leaves are shorter? Again, it will be observed that the leaf area of the mountain ash is small compared to the stem, and it may, perhaps, not be unreasonable to suggest that this may be connected with the habit of the tree to grow in bleak and exposed situations. The position of the leaves, the direction of the bough, and many other elements would have also to be taken into consideration; but still it seems clear that there is a correspondence between thickness of stem and size of leaf. This ratio, moreover, when taken in relation with the other conditions of the problem, has, as we shall see, a considerable bearing not only on the size, but on the form of the leaf also. The mountain ash has been a great puzzle to me; it is, of course, a true pyrus, and is merely called ash from the resemblance of its leaves to those of the common ash. But the ordinary leaves of a pear are, as we all know, simple and ovate or obovate. Why, then, should those of the mountain ash be so entirely different? May, perhaps, some light be thrown on this by the arrangement of the

leaves? They are situated some distance apart, and though, as shown in the table, they are small in comparison to the diameter of the stem, still they attain a size of 15 square inches, or even more. Now, if they were of the same form as the ordinary pear leaf, they would be about 7 inches long by 2-3 in breadth. The mountain ash, as we know, lives in mountainous and exposed localities, and such a leaf would be unsuitable to withstand the force of the wind in such situations. From this point of view, the division into leaflets seems a manifest advantage.

Another point is the length of the internode. In such trees as the beech, elm, hornbeam, etc., the distance from bud to bud varies comparatively little, and bears a tolerably close relation to the size of the leaf. In the sycamore, maple, etc., on the contrary, the length varies greatly. Now, if instead of looking merely at a single leaf, we consider the whole bough of any tree, we shall, I think, see the reason of the differences of form.

Let us begin, for instance, with the common lime. The leaf-stalks arranged at an angle of about 40° with the branch, and the upper surfaces of the leaves are in the same plane with it. The result is that they are admirably adapted to secure the maximum of light and air. They are $4\frac{1}{2}$ inches long, and very nearly as broad. The distance between the two leaves on each side is also just $4\frac{1}{2}$ inches, so that they exactly fill up the interval. In *Tilia parvifolia* the arrangement is similar, but leaves and internodes are both less, the leaves, say $1\frac{1}{2}$ inch, and the internodes .6.

In the nut (*corylus*), the internodes are longer and the leaves correspondingly broader. In the elm (*ulmus*), the ordinary branches have leaves resembling, though rather longer than, those of beech; but in vigorous shoots the internodes become longer and the leaves correspondingly broader and larger, so that they come nearly to resemble those of the nut.

In the maples, sycamores, and horse-chestnuts, we have a totally different type of arrangement. The leaves are placed at right angles to the axis of the branch instead of pinnate veins. In this group the mode of growth is somewhat stiff;

the main shoots are perpendicular, and the lateral ones nearly at right angles to them. The buds also are comparatively few, and the internodes consequently at greater distances apart, sometimes as much as a foot, though the two or three at the end of the branch are often quite short. Now, if we were to imagine six beech or elm leaves on these three internodes, it is obvious that the leaf surface would be far smaller than it is at present. Again, if we compare the thickness of an average sycamore stem below the sixth leaf with that of a beech stem, it is obvious that there would be a considerable waste of power. Once more, if the leaves were parallel to the branch they would, as the branches are arranged, be less well disposed with reference to light and air. A glance at a horse-chestnut, however, will show how beautifully the leaves are adapted to their changed conditions. The blades of the upper pair form an angle with the leaf-stalks, so as to assume a horizontal position, or nearly so; the leaf-stalks of the second pair decussate with those of the first, and are just so much longer as to bring up that pair nearly, or quite, to a level with the first; the third pair decussate with the second, and are again brought up nearly to the same level, and immediately to the outside of the first pair. In well-grown shoots there is often a fourth pair on the outside of the second. If we look at such a cluster of leaves directly from in front, we shall see that they generally appear somewhat to overlap; but it must be remembered that in temperate regions the sun is never vertical. Moreover, while alternate leaves are more convenient in such an arrangement as that of the beech, where there would be no room for a second leaf, it is more suitable in such cases as the sycamores and maples that the leaves should be opposite, because if, other things remaining the same, the leaves of the sycamore were alternate, the sixth leaf would require an inconvenient length of petiole.

If, now, we place the leaves of one tree on the branches of another, we shall at once see how unsuitable they would be. I do not speak of putting a small leaf, such as that of a beech, on a large-leaved tree, such as the horse-chestnut; but if we place,

for instance. beech on lime, or *vice versa*, the contrast is sufficiently striking. The lime leaves would overlap one another, while, on the other hand, the beech leaves would leave considerable interspaces.

Hence we see how beautifully the whole form of these leaves is adapted to the mode of growth of the trees themselves, and the arrangement of their buds. Let me say a word on the microscopical structure of the leaf. Although so thin, the leaf consists of several layers of cells. Speaking roughly, and as a general rule, we may say that on each side is a thin membrane, or epidermis, underneath which on the upper side are one or more layers of elongated cells known from their form as "palisade cells," beneath which is a parenchymatous tissue of more or less loose texture. The leaf is strengthened by ribs of woody tissue. From this general type there are, of course, numerous variations. For instance, some water-plants have no epidermis.

If the surface of the leaf be examined with a tolerably high power, small opaque spots will be observed, resembling a sort of button-hole, with a thick rim or border composed of more or less curved cells, the concavities being turned inwards. When dry, they are nearly straight, and lie side by side; but when moistened, they swell, become somewhat curved, and gape open.

It is difficult to realize the immense number of these orifices or "stomata," which a single tree or bush must possess, when we remember that there are sometimes many thousand stomata to a square inch of surface. In a large proportion of herbs, the two sides of the leaf are under conditions so nearly similar that the stomata are almost equally numerous on the upper and on the lower side. In trees, however, as a general rule, they are found exclusively on the under side of the leaf, which is the most protected; they are thus less exposed to the direct rays of the sun, or to be thoroughly wetted by rain, so that their action is less liable to sudden and violent changes. But the black poplar is an exception; its leaves hang nearly vertical, and the two surfaces being under nearly similar conditions as regards light and air, are nearly similar in all respects.

(To be continued.)

MAN AS A WANDERER.

[F, with the evolutionists, we regard man as the descendant of the anthropoid apes, we naturally look for the part where he first assumed man's character in some fertile and tropical land capable of at once furnishing the food necessary to support human life. The holders of the theory of evolution are, themselves, undecided whether man originated in one locality or in several. The majority, perhaps, hold to the unity of his origin; and they rather incline to locate the place on the continent now covered by the Indian Ocean.

The Biblical theory, again, leads us to a conclusion somewhat similar. The vagueness of the narrative, however, and the evident admixture of tradition, will only permit us to approximate; but his ethnological distribution points to some spot on the table-lands of Central Asia. Grouped about it are specimens of all three branches of human speech—the monosyllabic, of which the Chinese is the best example; the agglutinate, with the Tartar or Turkish as its type, and the aboriginal languages of America as instances; and the flexible, multiform, Indo-European, with English as a child. Not far distant we find the oval and symmetrical skull of the Aryan, the narrow and prognathous cranium of the Negro, and the square, pyramidal head-piece of the Mongol; and almost within hail, so to speak, is the Negro, the Malayan, the Mongolian, and the white of Europe.

In support of the Biblical account we might mention that there is a resemblance, more or less marked, between the annals of the Hebrew, the traditions of the Buddhist—whether he be a Calmuck of the Russian steppes or a Chinese Mandarin—and the mythological legends of the Brahmin, the Greek, the Scandinavian, the Magyar, the Esquimaux, the Mexican, and even the buffalo hunter of the American prairies.

But it is beyond the province of this paper to speculate on the genesis of man, and we lay it aside, merely premising that to us the theory of the divine creation seems the more probable.

At first view it seems incredible that the skin-clad and oily

fisher of the icebergs, who, in his snow-built igloo, gorges himself with the blubber of whales, can be of the same race as the lean and hungry Numidian who pursues the lion under a vertical sun; yet such we find to be the case. Kindred roots of words, grammatical structure, tradition and physiology, combine to tell us that their remote ancestors had a common father, while both are brothers of the Chinaman. We know, too, that at a period, past long years before the first history was penned, the Mongol race led the world; for they spread over much of Africa, almost the whole of Asia, and probably the whole of Europe and America. It seems likely that the multiplication of men in Central Asia forced out vast numbers of Mongols towards the north. Reaching the icy shore of the Arctic sea they filed east and west. Those who went west became the troglodytes and lake-dwellers of Europe, and some think we find their sturdy remnant, at the present day, in the Basques of northern Spain. The other portion either wandered over the land, which is now beneath the Pacific, and, at its subsidence, found themselves in America, or else went, step by step, from one Aleutian island to another and over Behring's Straits, and at last reached Alaska, whence they covered the American continent. That these two branches were a subdivision of an original migration is proved by the fact that, of all known languages of the old continents, the Basque is most nearly related to the American tongues.

The Esquimaux, who are by far the most Mongolian of all the Americans, are spread in rather a remarkable manner along the west coast of America, from the head of the Gulf of California northward. This, coupled with the fact that there is a very perceptible admixture of Mongolian blood in the veins of the Sandwich Islanders, and of the inhabitants of a few other of the most northern islands, lends color to the belief that, at a period very remote, man existed and covered the land over which the Pacific now rolls. After the land had sunk beneath the waters the Malays came in by ship, and their numbers soon obliterated any definite tradition, which might have reached us

of such an event. Opponents say that the Mongolian blood of the Sandwich Islanders only tells us that more or less luckless Chinese and Japanese junks have been blown to the east during some storms and finally stranded here.

But to return to Asia. While the Mongolians were migrating to the north the Malays were filling up Africa and the Australian continent. But the Mongols envied them the possession of fertile Africa, and came in as a conquering race. The Negroes, it is thought, are a cross between the two races; for their speech is Mongolian, their crania Malayan. They were an ignorant and populous people, say writers on the subject, and readily adopted the superior language of their less numerous masters. The Australian is a veritable negro in all but his speech and his meagre frame, and we know that the Mongol tends to corpulence. The fact that Madagascar is yet peopled by almost pure Malaysians adds strength to this position; and the Caffres and Hottentots of southern Africa yet retain a decided Mongolian aspect and speech.

Persian and Hindoo tradition tells us that the Aryan species of the human race had a great quarrel on religious matters on the table-lands of Asia, and that they separated into two parts. The Semitic branch went west, and in Mesopotamia and Syria became Chaldeans and Jews; in Arabia, Arabians. From here they spread over the Mediterranean coast and the whole north of Africa. In Abyssinia they form full one-half the population.

The other branch crossed the Indus into India and drove the peaceful Malays, who then occupied the land, to the mountains and out of the country. I call them peaceful, because fertile, tropical plains soon emasculate a race, and because the Bheels and Ghonds of the Himalayas and the Dravidas of the Deccan, who are their remnants, are a weak and timid people. But India soon became too narrow; and, recrossing the Indus, they pushed north and finally entered Europe. This first migration was the Celtic, which drove to the farthest portions, or exterminated, the Mongols then spread over Europe. They finally settled over all the west and south. In the west we call them Celts; in the south,

Pelasgi. They were soon followed by another horde, who, since the south and west was occupied, made homes for themselves in the central regions. Ethnologists are undecided whether the Greeks and, secondarily, the Romans were another migration, or a progress in civilization of the ancient Pelasgi. Probably both are more or less correct. As an illustration of these successive waves of immigration, we might instance the gipsies—undoubtedly the latest and least. At some unknown time, not long after the opening of the Christian era, they left the foot-hills of the Himalayas and visited Persia; after a few hundred years here they reached Asia Minor, or some other Greek country, and in the fourteenth century they became the chronic thieves and fortune-tellers of Europe.

About the time of the founding of Rome—that is, about 750 B.C.—the Scythians, a Mongol tribe living by the Caspian, grew restless and spread over the whole north of Europe. At a later period the Teutons crossed over from Denmark and drove them out of the Scandinavian peninsula. Now we know them as the Finns and Lapps of the north of Russia. Again, in the tenth century of our era, another Scythian tribe gained a footing in central Europe, and to-day we call them Magyars.

The Malays, with the exception of the occupation of Africa, seem to have confined themselves to the south-eastern peninsula of Asia, the Pacific Ocean, and possibly the western coast of America. Being by nature a race of sailors, we find them upon all the islands of the Pacific, from the all-but continent of Australia to the smallest dot of coral reef which can sustain life. The arid plains of Australia seem to have robbed their colonists of all their energy and spirit, for Tasmania is the only other island which bore a similar people. New Zealand is nearest Australia, yet its inhabitants came from islands far away to the north.

We have thus sketched in brief the migrations on the old continent, and one fact obtrudes itself. The Mongol race first held the ascendancy of the world, and under them budded and bloomed a high state of civilization, as we see in Egypt and

China. After an indefinite time they were supplanted by the Semites, who in Bablyon and Syria displayed great strength. Last of all, the Indo-European is physically and intellectually supreme; and I like to think that, just as Mongol Egypt fell before the Semitic Bablyon, so behind the gates of Carthage the Semites made a last desperate effort to stem the advancing Indo-European. But the inexorable law of succession had willed their fall. The Malayans either had their turn before the Mongols, or may yet become the leaders of the world.

It would be interesting to follow still further than we did the arguments, *pro* and *con.*, for the manner of the settlement of America, but space bids us hurry on. According to their own tradition, the Tchuktchi of Siberia are descended from the Esquimaux of northern America and Greenland. If so, they must undoubtedly have wandered to Asia by Behring's Straits; but it seems more probable that they are the parent, and from them have descended the Esquimaux. The Esquimaux can tell us nothing of their origin; but this we know: about 1000 A.D. they were much more widely spread than now, for at that time they occupied the east coast of North America from the vicinity of Long Island northward, and were a warlike race. We learn this from the Icelanders, who had a settlement in New England for many years. In Guiana and some other points on the north coast of South America we find the Caribs, who are the only near relations of the Esquimaux to be found in southern regions.

The best authorities on American ethnology make two divisions of the American people, and subdivide one of these into two very distinct varieties. These are the American, with subdivision Esquimaux, and the Toltecan. These latter were the semi-civilized people whom the Spaniards found in Arizona, Mexico, Central America, Bogota, Ecquador and Peru, and these shall be noticed later. The Esquimaux have been already touched upon. The American branch we may again subdivide into the Appalachian, the Brazilian, the Patagonian, and the Fuegan. The Fuegians, who call themselves Yacaunacunee, rove

only over the sterile wastes of their island, and are perhaps the most wretched and repulsive of mankind. They are short and unwieldy, and have not the least interest in or curiosity about anything which does not appeal to their present wants; and, what is still more strange, they seem to be destitute of vanity.

The Patagonians occupy all the continent south of a line drawn from the Plata to the north of Chili, except Tierra del Fuego. They are bold, generous, faithful, and warlike—in fact, the finest of the American aborigines. The Aaraucaians, of the mountains of northern Chili, are the best of them. They were already far advanced in civilization when first discovered. They lived in towns, cultivated the soil, and had a system of government very much the same as that of Poland in its palmiest days, were never conquered by the Spaniards, and are to-day, perhaps, the leading citizens of Chili. It is an exhilarating sight to go through the streets of a northern Chilean city and see one pass by. Tall, erect, and handsome, his black, energetic eye flashing from under his coal-black hair, and the graceful fold of his blanket, all mark him out as a man in the highest acceptance of the term. The custom of catching wild fowl by entering the water with a gourd over the head and then drawing them under by the legs is peculiar to this people, the Chinese, and the Thibetans. This seems to point to the chance arrival of some stray Chinese junk upon their coast.

The Brazilians are spread over all the part of South America east of the Andes and between the Amazon and the Plata. The Brazilian Indians are decidedly Mongolian in aspect, and are, perhaps, the least susceptible of civilization of all the American Indians. They are uninteresting, except for some of their customs and traditions, and that they seem to be the intermediate step between the Esquimaux and the Indian proper. The Guaranis, who are essentially peaceful and agricultural, as well as the tribes on the north bank of the Amazon, tell us that they migrated from the far north and drove over the Amazon the people who till then had hunted on the southern banks. Amongst tribes living high up the Amazon basin there are cus-

toms which correspond to those in Borneo. In both areas we find blow-pipes for discharging arrows, large houses inhabited by several families and similarly constructed, baskets and bamboo boxes of almost identical form and construction, and the smoke-dried heads of enemies are hung up in the houses. In one tribe on the Amazon the throwing-stick is used, and not the blow-pipe, which is employed by all their neighbors; the throwing-stick is also used by the Esquimaux, the Andaman Islanders, and the Australians. In Australia and on the Amazon an arrow or spear is used for catching turtles, which has the barb loosely attached to the shaft, so that when the turtle disappears the shaft floats on the surface and indicates its movements and position. Again, many other customs are common to the Americans and tribes living far remote, with which they have no apparent direct relationship. If these analogies do not arise from the common needs of the same latitude, we might infer, as is done, that waifs have taught them.

To us the Appalachian branch is the most interesting; for it includes all the nations of North America except the Mexicans and the Pueblo Indians, together with the tribes of South America north of the Amazon and east of the Andes. I do not propose to speak of the characteristics of these Indians, as information in regard to them is so widely diffused in Canada as to render it unnecessary. The tribes north of the Amazon have a tradition, which has been noticed, that the Guaranis came from the north. And the Iroquois tell us that the Lenni-Lenapi, who were their ancestors, a very great many years ago sent a request to the mound builders to be allowed to cross the Mississippi peaceably on their way to the east. Leave was granted them. As they were in the river, the mound builders fell upon them and slaughtered very many. From this arose an unquenchable fire of revenge, which burned until the mound builders were all killed or expelled towards the south.

Just here we might make a partial summing up. Judging from physical characteristics, we regard the American Indian, no matter who he be, as a descendant of the Esquimaux of the

north. Albert Gallatin thus states the received linguistic conclusion: "Amidst that great diversity of American languages, considered only in reference to their vocabularies, the similarity of their structure and grammatical forms have been observed and pointed out by the American philologists. The result appears to prove that all the languages of the native inhabitants of America from the Arctic Ocean to Cape Horn, have, as far as they have been investigated, a distinct character common to all, and an affinity with the Basque and the Ugrian, of which the Finnish is the best known variety." The study of American ethnology, while of great interest, is almost hopelessly confusing. The wonderful transmutation which language undergoes in a savage state of society, where there is no common priesthood, nor any national songs to preserve some form of speech, is here most fully exemplified. The lack of any hierarchical class has also left us without the slightest history of any of the tribes; and the fact that each tribe has traditions, and a mythology differing in almost every particular from those of any other, renders any ethnological study very complicated and perplexing.

In almost every part of the United States between the Rocky Mountains and the Alleghanies, we find remains of an ancient, numerous and powerful agricultural people. Tradition tells us nothing about them except their extermination and a doubtful name—the Allewegis, whom we call Mound Builders. We have all read of the ancient copper mines on the shores of Lake Superior; and from their mounds we sometimes dig this copper, both native and moulded into articles of use and ornament. We also disinter from the same mounds carvings in stone, pottery, often of elegant designs, mica from the Alleghanies, shells from the Gulf of Mexico, obsidian and porphyry from Mexico. Stones bearing characters which have a slight resemblance to the earliest carved stones of Central America have also been found. In Wisconsin and Iowa are found very many allegorical outlines of men and animals, constituting huge *basso-relievos* on the surface of the earth. One in Wisconsin is in the form

of a serpent over one thousand feet in length, extending in graceful curves and terminating in a triple coil at the tail. The neck is stretched out and slightly curved, and its mouth is opened wide as if in the act of swallowing or ejecting an oval figure which rests partly within the distended jaws. This oval is regular in form, four feet high, and its transverse and conjugate axes are one hundred and sixty and eighty feet respectively. The combined figure has been regarded as a symbolical illustration of the oriental cosmological idea of the serpent and the eggs. The general character of these mounds, however, can be drawn from one of the largest, opposite the city of St. Louis. It is seven hundred feet long by five hundred feet broad at the base, and is ninety feet high, is square, terraced, and was ascended by graded steps, which are now quite obliterated, as the owner has been attempting to level it to be able more easily to plough it. Others are hexagonal, octagonal or truncated, forcibly reminding one of the *teocallis* or temple mounds of the Mexicans, and the *topes* of India. About these elevated mounds are series of embankments with accompanying exterior ditches, and with approaches often artfully covered. When not erected near a stream, or when no spring is included within the fortifications, we always find artificial reservoirs for holding water, and other unmistakable provisions for withstanding siege, as well as sudden attack.

We may approximate to the antiquity of these remains, for apart from the fact that there are no reasonable traditions to account for them, and that the most ancient forest trees have lived and died upon the embankments and in the ditches, none of these works occur on the lowest of the river terraces. There is no good reason why the builders should have avoided that terrace, while they raised them conspicuously on all the other three, and therefore we must conclude that this has been formed since the works have been erected. Some of them, also, have been in great part destroyed by streams which have since receded half a mile or upwards, and which could not possibly, from rains, or other natural causes, reach the works again. The

four terraces mark four eras in the stream's age, and the last terrace marks the longest period, as the excavating power of streams diminishes as the square of their depth increases.

The human remains found in these embankments is another argument for their antiquity. Though the soil is dry and compact, and all the conditions for their preservation eminently favorable, they are usually in the last stage of decomposition: while, in the barrows of the ancient Britons, in a moist soil, and under unfavorable conditions, entire and well-preserved skeletons are found. We cannot, then, assign them an antiquity less than 2,500 or 3,000 years.

OLD ENGLISH IN UNIVERSITIES.

IN the *Fortnightly Review* for July of this year there is a bitter attack made by an anonymous writer on Mr. Edward A. Freeman, the recently appointed successor of Mr. Stubbs in the Regius Professorship of Modern History at Oxford. Under the title, "A Joke or a Job," the author of the attack assails Mr. Freeman for the part he has taken, along with Max Müller, Mr. Brodrick and the Librarians of the Bodleian and the British Museum Libraries, in the selection of an incumbent for the "Merton Professorship of English Language and Literature." Their choice fell upon a Mr. Napier, who has achieved some distinction in the study of Anglo-Saxon at Göttingen, and the writer asks, not impertinently, why, if Anglo-Saxon scholarship was to be a chief qualification, the position was not given to Mr. Earle, who is a well-known Anglo-Saxon scholar, and is already an Oxford professor.

I am not in a position to discuss the expediency of the appointment, but I wish to make use of it as a sign of the present tendencies of English scholarship. Mr. Freeman's own eminence is due chiefly to his success in working out in his histories the theory that England was always England, that the English were always English, and that the English language

was always the English language. His most eminent disciple was the late Mr. Green, who has aided him in disabusing the public mind of the erroneous impression that there was even any sharp transition in the history either of the English people or of the English language. Possibly Mr. Freeman may have erred in giving undue prominence to the philological, as distinguished from the literary, side of the new professorship, but a little exaggeration in this direction is not likely to do much harm in Oxford at a time when English scholarship has to follow in the wake of the German explorers of the history of Old English, as it is becoming the fashion to call Anglo-Saxon.

I am reminded by this incident of the slight importance heretofore attached to this department of English culture in Canada. In several American universities, Anglo-Saxon and other pre-Chaucerian works are read as carefully and systematically as are the Greek, or Latin, or modern foreign texts. One need no longer go to Germany to obtain a fair knowledge of the older forms of the English language or the older specimens of English literature. Much has been done to elucidate and popularize both by such men as March, Corson, Wood and Lounsbury in America, and Skeat, Morris, Earle and Ewart in England, so that no one who desires to be able to read Old English need now leave his wish unfulfilled for want of sufficient aids.

It may at once be admitted that Old English texts are more valuable for philological than for literary study. For this reason it is not good to place them low down in a university curriculum. The earlier years of the English course should be devoted to acquiring facility, if not elegance, in prose composition, both oral and written, and a good general acquaintance with modern English literature, both prose and poetry. But there is no reason why, during his undergraduate course, the student of English should not acquire a knowledge of the successive stages of our language and give some attention to at least the three chief literary works of the pre-Elizabethan period—the "Canterbury Tales," the "Vision of Piers, the Plow-

man," and "Beowulf." No man can claim to be a first-class English scholar who has not done so, especially at a time when all high-class American and English universities are acting on this view.

As a specimen of old folk-lore, "Beowulf" is quite as important for the student of English as the "Nibelungen Lied" for the student of German, or the "Iliad" and "Odyssey" for the student of classic Greek. The wonder is, not that so much attention is now paid to it, but that it has been so long neglected. This remark applies equally to the "Vision of Piers, the Plowman." Almost contemporary, in its present form, with the "Canterbury Tales," it is in respect of language very much more archaic, while it is alliterative rather than rhythmical in structure. But its chief value lies in the picture it gives us of the social life of the latter part of the fourteenth century. In it the still unfathomed misery of the common people during the reigns of Edward III. and Richard II. find a voice, rather than in the social descriptions of the "Canterbury Tales," for the obvious reason that while the latter are the work of a court humorist, the "Vision" is the production of one who lived amongst the people, sympathized with them in their sufferings, and spent his time in administering to them the consolations of the gospel of Christ. We obtain from other sources ample proof that the pathetic wail of the "Vision" is a true expression of popular feeling. We learn it alike from the popularity of the poems, from the social uprising under Wat Tyler, and from the "Statute of Laborers," which was passed with a view to preventing servants from availing themselves of the advantage that would naturally have accrued to them from the decimation of their numbers by the "black death." I do not wish to appear as underrating the literary value of the "Canterbury Tales," but that is now so thoroughly appreciated that I need say no word in its favor as a text for the university study of English.

But even if we had no compositions of such literary volumes as the three I have mentioned, it would still be necessary to

study Old English texts for philological purposes. It was not very long ago the general opinion—and unfortunately this view is still too prevalent—that the provincial dialects of English are corrupted forms of the classical language. A wiser philology has taught us that what we call classical “English” is but one of a number of local dialects, many of which survive only as spoken *patois*, while not a few can boast each of an extensive literature. One of these dialects, which probably had its “local habitation” in the midland district of England, became by the chapter of accidents the predominant language, and the writings of Chaucer, Wyclif, and others, made its predominance permanent. The analogue of this process is to be found in that which made the Attic the predominant dialect of Greece, in that which developed one of many spoken dialects into classical Latin, in that which performed a similar service for modern classical French, and in that which made one of the high German dialects the language of Luther and of Goethe. The student of Old English may not be able to appreciate, in all its beauty and force, this law of natural selection and the survival of the fittest in language; but he will be able to catch at least a glimpse of one of the great scientific truths, and will have his intellectual horizon expanded by its apprehension. Not till he learns that our own beautiful and flexible language has passed through extensive changes of form, that it was formerly one of many local dialects which had equal chances of literary development, and that many of these dialects still survive in a less altered form, is the student in a position to understand clearly the wider relations of English as a member of the great Teutonic family of languages, and of the still larger Indo-Germanic group with their common Aryan element.

But I may be told that he can learn all this more easily from philological compendiums like Latham's or Earles, which give in brief compass the digested conclusions drawn from the researches of many eminent scholars, than he can learn it from his own reading of Old English texts. This brings me face to

face with a view I regard as utterly fallacious, and with a practice which I regard as extremely pernicious, both together being fatal to the wide diffusion of sound English scholarship. From the primary school to the university the prevalent practice is to teach and learn *about* English, instead of teaching and learning English. Grammar is defined as the art of using the language correctly; but instead of trying to teach grammar in accordance with this definition, by insisting on constant practice under judicious guidance, the prevalent method is to require facility by practice in applying them. Instead of imparting a knowledge of philology incidentally by the careful use of it solely as a means of elucidating the meaning of English texts, the prevalent method is to require the pupil to learn long lists of prefixes, suffixes, and roots, and to practice the art of "building up" words by means of fragments, as a mason uses isolated stones in building a wall. Instead of acquiring a knowledge of figures of speech gradually and incidentally as they occur in his reading, the pupil is required to learn the names of a long list of these figures and to recognize them from memorized definitions. Equally absurd and unscientific is it to require a university student to master English philology intelligently and usefully by confining his reading to such a work as Earle's "Philology of the English Tongue." If he wishes to know what Old English is like he must go to the trouble of reading the old literature, or at least enough of it to make him somewhat familiar with the language in its different stages.

Let me conclude with a few words on what I consider the best method of doing so. The student should begin in, say, his third university year the study of Anglo-Saxon, leaving to a later period all later stages of the language, including the text of Chaucer. Having mastered the highly inflected Anglo-Saxon he will be in a position to follow it through that double process of phonetic decay and dialectic regeneration that produced the language of Shakespeare's plays and of the authorized version of the Bible, both of which, I need hardly say, should be read in the original, not in modernized spelling. This

may be described as the down-hill method, the up-hill method being the very common one of going back chronologically through the various stages and learning what is virtually a new language in each. Fortunately there are now ample materials for the study of Old English in the series of "Specimens," edited by Mr. Sweet, Mr. Skeat, and Mr. Morris, and published in excellent form by the Clarendon Press. Mr. Sweet's Anglo-Saxon Reader is self-contained, being furnished with grammatical introduction and glossary, and so is each of the other three volumes. The second and third, edited by Morris and Skeat jointly, are entitled "Specimens of Early English." The fourth, edited by Mr. Skeat alone, is called "Specimens of English Literature." It takes in part of Spenser's "Shepherd's Calendar," and thus brings the series down to within a decade of the beginning of Shakespeare's dramatic career. A considerable portion of the specimens in each of these volumes should be read by the student of Old English during his university course, and if he desires to carry his studies further, he will then be in a position to do so with pleasure and profit to himself.

WM. HOUSTON.

"WHY is a young man like a kernel of corn?" asked a young lady. "Because," said another, "he turns white when he pops."

I HOLD that a man has just as much right to spell a word as it is pronounced as he has to pronounce it in the way it ain't spelt.—*Josh Billings*.

MUST LATIN GO?—When a bill concerning the great seal of the Commonwealth was before the Massachusetts Senate, a member moved to strike out the words, "Sigillum Reipublicæ Massachusettensis," and insert "The Seal of the Commonwealth of Massachusetts." He said he thought this change would commend itself to the Senate, and he was sure it would to the people of the Commonwealth. The matter was postponed until the next session.

THE ENGLISH LANGUAGE.

YEAR by year the English language is being enriched by the growth of its literature, and extended by the energy of the people who use it. There are some strong grounds for believing that it will become the most extensively spoken language in the world; not so much on the principle of the survival of the fittest, but because of the progressive activity, in all departments of thought and action, of the people who speak this tongue. In a recent work by M. de Candolle, one of the representative men of science in Geneva, Switzerland, a chapter is devoted to the advantage to science of a universal language, and to the question, "Which of the modern languages will necessarily be dominant in the twentieth century?" The learned author answers this question decidedly in favor of the English. And he does this in spite of the fact that French is his native language, and that French now holds the first place in European diplomacy and literature.

Dr. Abel Stevens, in a recent article, gives a summary of the grounds on which M. de Candolle bases this conclusion. When Latin was the language of the learned, it greatly facilitated the intercourse of learned men all over the world; but it had the great disadvantage of making the learned a separate class, and keeping the common people of different countries in ignorance of what was taking place in the world of mind. Indeed, for centuries the scholars and authors of Europe had no confidence in their native languages as a vehicle to transmit their thoughts to future generations. In spite of the faith of such men as Dante and Chaucer, even as late as the time of Queen Elizabeth, Lord Bacon does not seem to have had faith in the English language as a fit medium to give his ideas to the world. The great Protestant Reformation in all countries led the teachers of religion to use the press as a means of speaking to the people, and this principle ultimately prevailed, and lifted the modern languages up into a higher place. The French naturally succeeded the Latin as the language of learning, partly because it

was spoken by a large proportion of the learned men of the world, and partly because it was so largely derived from the Latin, and in close family relation to Italian and Spanish. But in our times British colonization and missionary enterprise are slowly, but on a vast scale, extending the use of the English tongue in every part of the world. Commercial enterprise and travel are now rendering the use of English necessary on all the great routes of travel; and it is being taught in France and Germany in many of the public schools.

The only languages which can compete for the first place in the race are the English, German and French. Taking the statistics of 1870, M. de Candolle gives the numbers which speak these three languages thus: French, 40½ millions; German, 62 millions; English, 77 millions. At present the showing would be still more favorable to English. But the more rapid increase of population of English-speaking countries gives a strong pledge of the ascendancy of the English language. Supposing the relative increase of the people of these three languages to continue from 1870 to 1970 at the same rate as in the past, the result would be in 1970: English, 860 millions; German, 124 millions; French, 69½ millions. That is, the German-speaking people would be one-seventh of the English-speaking, the French less than a twelfth. M. de Candolle has no partiality for the religion, or views of the English, yet he admits that such a spread of the English language will be in the interests of the race. But to all who look at the matter from an English and Protestant standpoint, the prospect is of great interest. Our scientific discoveries, our free institutions, our rich literature, our justice and morality, and, above all, our Christian faith, will be carried, through the spread of our language, to enrich and vivify every part of the world. The people who speak this language have a great destiny before them.—*Selected.*

KNOWLEDGE and timber should not be much used until they are seasoned.

EAZY AZ A B C.

FIRST STAJE OV THE SPELING REFORM.

From "Progress," April, 1885.

BUT on whoze authority iz it to be aksepted that A B C iz eazy? If we ask a shrewd laborer or working man, who, owing to being neglekted in youth, haz had to teach himself the arts ov reading and writing, it iz plain that ther ar several konsiderationz tending to explain hiz suksés. The wil and enerjy that prompt the undertaking go a long way towardz its akomplishment, while hiz experiens ov life and hiz sens ov responsibility konstantly stimulate him to renewd exertionz. If, on the other hand, we apeal to juvenile experiensez, we shal be leaning on a broken reed, sins no helthy child who has lernd to read at the usual erly aje wil remember, or kare to remember, how much troubel this despized akomplishment kost him. No morbid retrospektion troublez hiz free soul. Hiz biznes iz with the prezent; the future troubelz him but litel, and the past not at all. No authority, therefore, seemz to be forthcoming for the dogma that A B C iz eazy, unles we fall back upon that ov Dogberry, who assurez us that "reading and writing come by nature." Against this impozing theory each ov us can put hiz own experiens ov the extreme diffikulty ov spelling korrektly. Dr. Morell, an eminent inspektor ov skoolz, haz said that "it would require a study ov Latin, French and Anglo-Saxon to enabel a person to spel with faultles akurasy." Even this iz an under-statement ov the kase, for it often hapenz that linguistik attainments mislead, instead ov assisting, the speller. When spelling beez wer in vogue, a paragraf appeard in the newzpaperz to the effékt that Lord Sherbrooke (then Robert Lowe) had faild to spel a Saxon word ov one syllable; and such a blunder az spelling *appreciate* with two *t*'s (*appretiate*) iz not felt to be unpardonabel, even in an Oxford don.

Every kandid person admits that he iz okasionally in dout az to the spelling ov even the kommonest wordz. Indeed, it iz probabel that the only personz who make even an approach to

perfekcion in spelling ar such az ar kompeld by their ordinary okupation to keep up a stern, unremitting effort—*e.g.*, pres readerz and kompozitorz. In our publik skoolz, hourz and dayz ar painfully spent in intoning or singing the spelling ov a few wordz. Yet, in spite ov all this prolonged toil, only a ludikrously small minority ov the skolarz reach the Sixth Standard. Even the teacherz, akording to an Amerikan authority, would fail in this subjekt to the extent ov 25 per sent, while at home we find it to be the fatal drawback to a vast majorit ov Sivil Servis kandidates. Surely ther iz no room for douting that our method ov teaching to read iz an awful kase ov cruelty to children. They ar assured tnat it iz their duty and privilej to acquire in their childhood an akomplishment which haz actually provd beyond the reach ov their pastorz and masterz. And this akomplishment iz without any redeeming featurez. Its terribel strain iz unrelieved by any sujestion ov variety or utility. On the kontrary, any intelligent child who rizez above a dul mekanikal routine must be konstantly irritated by the palpabel absurditiz set before him. It iz true that sertain diffikultiz kan never be dissociated from the arts ov reading and writing. They must alwayz inklude an arbitrary, and, therefore, an uninteresting, element, sins no reason kan be given why letterz should reprezent sertain soundz, and no helthy mind kan take an interest in symbolz for their own sake. But we need not hezitate to admit the reality ov this diffikulty, seeing that it iz capabel ov being immensely redused, and that, after all, no harm kud kum from postponing this artificial study to a later staje in the life ov the child, just az it haz been one ov the later stajez in the life ov the rase. A child may profitably okupy several yearz in the unsystematik study ov the objekts and prosesses ov “the household, the streets and the fieldz,” az Herbert Spencer haz taught us, and then wil be all the better fitted to deal with the study ov books. But insted ov providing the eaziest possibel system, and bringing it gradually into operation az the child iz abel to bear it, we forse upon it at the tenderest aje a krushing mas ov anomaliz and

kontradiktionz. Some boyant spirits doutles rize above their troubelz, and in the playground or in the biznes ov after-life edukate themselvz, in spite of their teacherz. But how many fail entirely to acquire that taste for reading which iz the only objekt aimed at in our kommon skool edukation? In other wordz, how many fail to gain, not simply instruksion, but the very instruments ov acquiring noledj for themselvz? Sup-pozing one-third ov the skool-life—a very moderate estimate—to be spent in realizing the enormity ov bad spelling and in a jenerally hopeles endeavor to korrékt it, we hav set before us a magnifisent prize to be won by the overthrow ov the jiant Spelling, and such a viktory need not, akording to some ov the best authoritiz, be a very diffikult achievement. The ranks ov the spelling reformerz now inklude filologists such az Max Müller, Latham, Richard Morris, J. H. Murray, W. W. Skeat, A. H. Sayce and W. D. Whitney, statesmen such az Gladstone, Sherbrooke and Trevelyan, and edukationists like Bain, Meiklejohn and Morell. It must not be understood that all these namez ar subskribed to any definit plan ov reform. Their testimony at prezent iz that “something must be done.” When we hav to faze the question what that something must be, the British love ov kompromize wil immediately manifest itself. But it iz probably to be dezired rather that the matter be postponed than that any kompromize be aksepted. If a chanje must be made—and this, akording to Max Müller, “iz no longer a matter for argument”—a kompromize would probably be almost az difikult az a kompletely rational setelment. After the foolz hav rusht in (once more to quote Max Müller), “the track becomez beaten, and even anjelz ar no longer afraid.” The problem iz a very simpel one, and the chief obstakel in the way ov its solution is mere *vis inertiae*. Let this once be overkum, let the need for innovation be rekognized, and the battle iz half won. Our alfabet, with only twenty-three real letterz (for *c*, *q* and *x* ar useles), haz to represent thirty-six soundz. Let us, therefore, hav thirteen new letterz, so that every sound may hav its korresponding sign; and if this rekonstruktéd

alfabet wer uzed konsistently, it would be found that the disagreeabel task ov lerning to spel woz praktikally abo'isht. The great advantaje gaind by the children, to say nothing ov the alleged saving ov 10 per sent in the labor ov type-setting, haz been fully establisht by a wide experiens. Mr. William White sayz: "I speak from experiens. I hav taught poor children in Glasgow to read the Sermon on the Mount after a kourse ov exersizez extending over no more than six hourz." This startling statement appearz to need a partial qualifikation. The poor children reférd to must hav been willing lernerz, who found some meanz ov helping themselvz during the teacher's absens, and the six hour's aktual instruktjon woz probably extended over very many dayz. To the same effekt iz the testimony ov an English banker, who taught hiz son to read fluently before the aje ov five by a kourse ov eight hours' teaching imparted in snatchez of five minutes at a time. He further klaimz that fonetik reading iz the best and quickest introduktion to the ordinary system,—giving az an illustration hiz eldest son, who had won prizez for spelling in a kontest with much older boyz, and had been traind from the first on the fonetik system. The praktikal value ov the reform may be considered az fully establisht by the high authority ov Mr. A. J. Ellis, F.R.S. He sayz: "Kareful experiments in teaching children ov various ajes and ranks, and even pauper and kriminal adults hav establisht (1) that pupilz may be taught to read books in fonetik print slowly, but surely, in from ten to forty hours, wil attain considerabel fluensy after a few weeks' practis; (2) that when the pupilz hav attaind fluensy in reading from fonetik print, a very few hourz suffize to give the same fluensy in reading ordinary print; (3) that the whole time nesenary for imparting a noledj ov both fonetik and ordinary reading doez not exsede eight months for children ov averaje intelijens between four and five yearz ov aje, taught in a klas at skool not more than half-an-hour to an hour each day; and that in this time an ability to read iz acquired superior to that usually attaind in two or three timez the period on the old plan, while

the pronunsiation ov the pupil iz much improovd, hiz interest in hiz study iz kept alive, and a lojikal training ov enduring value iz given to hiz mind by the habitual analysis and synthesis ov spoken sounds; (4) that those taught to read in this manner acquire the art ov ordinary spelling more readily than those instruktet on the old system."

On the other side we uzet to hear some yearz ago the fierse denunsiation ov Trench, the supersilious warningz ov Alford and the ridikule ov the *Saturday Review*. It woz then kontsidered very funny to say Frantik Nuts insted ov Fonetik Niuz. To-day oppozition seemz to be overawed, and the reformerz hav simply to kontend with the ded weight ov indifferens. One argument certainly must not be deemed kontemptibel, namely, the kontention that konfuzion would arize by substituting various pronunsiationz for the prezent uniformity ov print. It is undeniabel that throughout the English speaking world ther ar numerous and sometimez very wide differensez ov pronunsiation, but it by no meanz folowz that these differensez ar very striking among literary people, and would therefore find their way into type. On the kontrary, in spite ov all the varietiez ov dialekt, ther would be found even now a tolerably stedy standard ov pronunsiation, and this standard would be strengthend and improovd. At prezent it matterz littel how we may pronouns, but if eksentrisitiz ov pronunsiation wer mirrord for us in the written or printed paje greater kare would be exersized to the distinkt advantaje ov our elokution. Even in the kase ov those who would kling to dialektik peku-liaritiz, ther would be no greater hardships than at prezent. A man whoze konversation at prezent iz beautiful Dorik, forsez himself into stilted English when writing a letter; this must be more diffikult than would be the effort to write the same stilted English fonetikally. The rezults ov the chanje would soon manifest themselvz in skool children. Insted ov the wide gap now existing between their written and spoken languajez, the two would konstantly akt and reakt on one another, and the tendensy would be towardz uniformity, both ov spelling and speaking.

It haz been said that the adult Briton piks up hiz jeografikal noledj during the progres ov our littel warz. In the same way he might lern to bekum a spelling reformer, for the greatest drawback to a friendly diskussion on foren politiks iz its tendency to drift into a diskussion on foren pronunsiation. If our alfabet supplied the distinktion between to kindz ov *A*'s ther would be no unsertainty az to the pronunsiation ov the Egyptian *moukabala*, nor should we hav seen one newspaper enkourajing itz readerz to say *Gundämak* while another regularly printed *Gandämak*, an entirely different word. An indikation that the sekond syllabel ov *Gandämak* [*Gandahmak*?] and one ov the syllabelz ov *moukabala* have the *a* broad, would be quite sufficient to sekure uniform pronunsiashon. A partikularly absurd specimen ov the resoursez ov our alfabet iz the word *Emir*. Apparently with the idea ov making it fonetik, the spelling woz chanjed to *A-m-e-e-r*, with the rezult ov making many peepel aksentuate the first syllabel and pronouns it broad (*Ahmeer*).

Now it iz obvious that to sekure such a chanje az spelling reform we must hav konserted aktion. Lord Dundreary said that a bird kud not flock by itself, and most ov us wil deem it equally impossibel for an individual to reform hiz own spelling or hiz own muzikal notation. The intervention ov some authority iz essential, and in this kountry, wher ther iz no despotik literary Academy, the only possibel sourse from which help kan kum iz the Government. Through the Sivil Servis examinationz, through Blue Books and other official dokuments, but above all through the Inspektorz of Skools, the Government might eazily akomplish the task. Some, no dout, wil regret that such an appeal should be propozed, but certainly in this kase paternal Government, if you chooz to kall it so, iz quite inevitable. Our monstrous system ov spelling iz a mere fashion, but it iz an establisht one; and there is no diktator at Paris or elsewhere to tel us when a new fashion should kum in. We have simply to wait until the spred ov elementary edukation haz made the diffikulty more widely known and also until our Hous ov Komonz manajez to sekure a litel leisure.

REFORM IN IRELAND.

WHAT does Ireland need? Reform. When is reform needed? Now. Who can give it reform? The Irish people. How? By reforming themselves. Let the Irish drink less whiskey, use less tobacco, swear less, cultivate a forgiving spirit, act honorably towards their own countrymen, be true to themselves and the Empire, and soon the reform they need will emerge.

At present the average Nationalist is a hater of England, law, order and a broad and honorable manhood. The average Irishman of to-day cries aloud and excitedly for liberty, but would not let his neighbor live according to the dictates of his conscience. He is wonderfully religious, but not Christian. He cannot forgive. He does not love his enemies; and very little love or respect has he for his friend, Queen Victoria, for instance. In fact, he is bound to hate, drink, swear, fight, kill and rebel, while in the act of calling reverently upon his gods.

Let the Irish people look for local rule and soon they will have what they need. There can be no harm come either to Ireland or the Empire if a provincial form of government be granted to the Irish people. They should, perhaps, under present circumstances, be allowed a legislature similar in form to that of Ontario or Manitoba. Let Ireland stand as a province and have internal government, with proper limitations.

But what do the Nationalists want? Why, a king of their own, a policy of their own, a navy and army of their own. Poor, foolish patriots. They love the Emerald Isle, but would explode it with blind, unreasoning, animalistic love. A king, emperor, czar, sultan, president or pope for the Irish! A national existence. A plan of their own for about two years, and——? Yes, a mob, man and woman mob eruption.

Let the Nationalists and all Irishmen of sense quit their blathering and settle down to personal reform, for a few months even; then they will see that they are on the right road to universal improvement. As the Ontario man, or Highland

Scotchman, or the Australian is a unit of the grand British Empire, so let all classes of Irishmen be proud to uphold the power of the grandest throne God has ever erected among the nations of the world. When Irishmen become manly enough to rise above petty hate, and can honor the British flag, there will be some hope for him arising to such a plane of noble and Christian action as to be a source of strength to the cause of national prosperity instead of being a disgrace to himself and a reproach to his manhood and religion. Ireland for cosmos instead of for chaos!

X.

LET US HAVE A COUNCIL.

“**T**EMPORA, mores, et littera mutantur, atque mutabuntur.” Our politicians and educationists are not fair in their dealings with Minister Ross, or wise in their labors for the people. In the first place, they are driving a willing, vigorous and able worker beyond his strength. At present the Minister of Education is asked to do a large portion of the political work of Ontario and almost all engineering of the educational work of the same province. This is not just, nor is it reasonable, not even humane. No living man, no matter what his natural and acquired ability, is able for the two—nay, not even for the one, viz., education. It is right and wise to have a Minister of Education directly responsible to the legislature and to the people, but he should be aided in the most practical way. No one man, no two men, no three men, can be found capable of, nor should be entrusted with, the working out of the complex and momentous issues of all educational arrangements connected with the present and future life of the country. Let our men of experience, culture, vast knowledge and honor look at the matter in a business-like manner. What we want is a council composed of representative educationists—men of university experience, men of the inspectorate class, men of high-school system, and from other departments of practical educational work. Let the number of this council be named by the legis-

lature. The universities should choose one or more from their several professors as members of this council, the high school masters should select their delegates, and the public school inspectors should likewise send deputies; so on to the limit laid down by prudence and wisdom. The legislature could appoint say one-fourth of the council. The members of said council should meet regularly and construct all the curricula for the entire school system of the province. The Minister would then be in the proper position, aided by a competent council, relieved of much drudgery, and responsible to the country for opposing or accepting the recommendations of the council. The members of the council would be directly responsible to their several electors, and might be elected annually, if satisfactory to their educational constituents. All school-books (with their prices), holidays, times and methods of examining, appointment of examiners (with the remuneration), general school classification, qualifications of teachers, and a universal standard of matriculation, since this is high school work. Of course many other details could be mentioned, but the above will do at present. While the Minister of Education and all interested are studying this matter—for *hundreds are examining* closely—it will be wise to keep clearly before the mind the great and absolute necessity of providing a permanency of position for the teacher who is efficient and trustworthy.

Z.

A DEAD heat—Cremation.

“It is the pace that kills.” *Requiescat in pace.*

“A MAN in a sleeping-car went through a terrible accident, in which the car rolled down an embankment, without waking.” The car must have been a *heavy sleeper*.

THERE are three difficulties in authorship: to write anything worth the publishing, to find honest men to publish it, and to get sensible men to read it.—*Josh Billings.*

MADAGASCAR.

THE papers inform us that the French are raising money, men and other means whereby they may be able to continue their disgraceful war with the Hovas of Madagascar. For two years now they have been unjustly oppressing those poor people, whose only fault is, that they desire to live at peace in their own country, and advance in the work of civilizing themselves.

A barbarous horde of bloodthirsty, rather glory-thirsty, Frenchmen must pounce upon a people simply because they are living at home and minding their business. It is not strange, however. The French people rushed into a European war, a Peninsular war, a Franco-German war, a Chinese war, and in every case the thing they sought—glory, military renown—they found not. About as much manly honor impels the Frenchman of to-day to enter upon military exploits as in the past. If the councils of the Republique Francaise must tend in the way of war—if they are bound to be unjust, false and tyrannical, and thus hinder the the progress of Christianity and the general advancement of the people, then the civilized nations should speak with an imperial voice one word: *halt!*

The Gallic robber is now at the present moment throttling the very life of an island nation. Is there no hand to smite the pirate? Will no man, no nation lift up the voice of warning? Are the Christian peoples of the earth so occupied with petty schemes as to let a national ruffian murder, in the light of day, before the gaze of an onlooking human brotherhood, a poor helpless queen? Is there no soul of sympathy to draw the stony-men's attention to this cruel-hearted act of inhumanity?

Let England and Germany say to the glory-seeking pirate, hands off. Let the voices of all humane nations say hands off. Let the parliaments, congresses and press of the two hemispheres shout hands off. We advise, exhort, entreat the vainly-infatuated Frank to remove his hands, change his tactics, attend to his own business in a legitimate and honorable way.

In the name of enraged feebleness, purity, and devotion to right on the part of the people of Madagascar, we say stand back thou Godless man of puffed-up littleness. In the name of the brotherhood of man we say halt. Hear the command of the imperious General of the universe and lay down your bloody sword; get thee down in the dust and lie abased before enraged humanity. Halt *soon* in your work of rascality, or die the death of the highwayman. Z. Z.

CORRESPONDENCE.

It is worth while looking somewhat carefully into the letter of Mr. Robertson, of St. Catharines, in the *Educational Weekly*. Without doubt the truth is told in few words. According to this gentleman's opinion, not only would Victoria, but education in general, suffer from the proposed federation. Further, it is quite evident that no basis of federation which would attempt to force into existence *only one University* would suit Mr. Robertson's views of this vexed question. We believe that the writer is not out of harmony with the vast majority of honest-minded Canadians. A single University will be a grand blessing to Ontario just as soon as a Provincial blacksmith's shop or grist-mill is made to meet the needs of the people. X.

ON page 22 of the July KOSMOS this sentence occurs: "Should Victoria enter confederation, the new University will certainly have an overwhelming influence in the schools." "Overwhelming" as compared with *what*? "Overwhelming" as compared with the "new University" non-existent? or as compared with the new University, Victoria not joining? or as compared with Queen's? or as compared with the total influence now exercised by the combined colleges? Some kind friend will kindly explain. Y.

QUEBEC should feel proud of its amazing liberality in the cause of education. *Seventy-two dollars* per annum may be used as the unit by which to measure the Quebecers' love for common school education. *Cause?* Z.

SCIENCE NOTES.

WE have great pleasure in publishing the following letter, from the Rev. James Smith, a Presbyterian missionary in India. It is dated

AHMEDNAGAR, INDIA, *June 2nd, 1885.*

DEAR SIR,—I have just had a most delightful vacation of two months at the Pulney Hills, in the extreme south of India. The Sanatorium is one that promises to become one of the most popular in India, though it is now frequented almost exclusively by missionaries and their families. It is south of Madras, on the South Indian Railway, and can be reached from Madras in about thirty-six hours, twenty-four by train and about twelve by cart and pony. The hills are about 8,000 feet high, and the climate is unsurpassed in the world. The sun while bright is not hot. Showers are frequent, and heavy rain rare. The tops and sides of the hills are clothed with the richest vegetation. Formerly there were few trees except in wet places, but the Forest Department of Government has done a good deal of tree planting, chiefly of the encalyptus or Australian gum tree. It has been a great relief to me to find a climate where one could spend the whole day out of doors, and as this place is a Botanist's Paradise, I have not been idle. Amid such luxuriance, it would be the work of years to collect specimens of everything found here, so I have given my whole attention to ferns, and have been amply repaid. I give you a partial list of those I have collected within a radius of seven miles. With time and diligence one could collect a much larger number of varieties. I shall be glad to hear directly from botanists in Canada, and to exchange specimens. Yours ever, etc.

[Here follows a list of 64 varieties of cryptogams, very rare and beautiful, a copy of which we will gladly furnish to any botanist desiring one.—ED.]

NERVOUS SYSTEM IN SPONGES.—The discovery of a nervous system in sponges has been made by an Australian naturalist,

Dr. Von Lendenfeld. According to the *American Naturalist* for June, in certain calcareous sponges this observer has detected ganglion cells, with branches connecting them with other nerve cells, which are spindle-shaped. In the *Leucon* sponges sensory cells are present, but not concentrated round the pores or so-called mouths of the sponge. These cells are scattered here and there in groups over the general ectodermal surface. Heretofore, the jelly fishes were the lowest forms of animal life in which a nervous system was known to exist.

NEW LIGHT ON THE ORIGIN OF SPECIES.—In the proceedings of the Academy of Natural Sciences of Philadelphia, just issued, is an account of the formation of a new species in the case of a *Cypripedium*, which normally bears a one-flowered scape, and which has produced a subspicate inflorescence, and a change of form of the flowers going in company with the departure. Similar changes, which seem permanent and are perpetuated by seed and off-sets, have been produced by the same species in locations many miles apart. *The new forms are in fact new species.* From this fact the author of the paper deduces the following propositions: First, that species may come into existence by sudden leaps. "Missing links" are not necessary in every case, and the slow modifications through ages need not be traced by the evolutionist; and secondly, that identical forms, introduced as new species, may appear in different parts of the earth, and therefore the time asked for a given species to distribute itself over the earth from a common centre, may be shortened. Well attested facts of this nature will change many theories as to land connection, in some former times, between places where similar species are found, as *e.g.*, Eastern United States and Japan, the West Indies and the North-Western coast of Africa.

THE CONSUMPTIVE PERIOD.—From the time of Hippocrates down, the period in which men are most susceptible to consumption has been fixed between the ages twenty and thirty-five years, and the natural deduction was that gradually they acquire

immunity from the disease. It is perfectly true that more persons die of consumption in this period than in any other, but the other statement is not upheld by a closer study of statistics. There are fewer persons in any period succeeding the one named, and it is found that while the percentage of the entire mortality is less, the individual risk is greater, as we take later periods. Wurzburg, in Prussia, found the following table of percentages of annual mortality from phthisis, for every 10,000 persons, living at each period:—

Age.	Men.	Women.	Age.	Men.	Women.	Age.	Men.	Women.
0-1	24.95	21.92	10-15	4.35	7.38	40-50	57.10	40.10
1-2	20.27	20.55	15-20	17.87	18.87	50-60	82.38	54.48
2-3	12.09	12.94	20-25	34.77	25.93	60-70	112.25	76.09
3-5	6.49	7.18	25-30	40.04	33.58	70-80	75.23	50.03
5-10	4.07	5.26	30-40	44.25	38.12	Over 80	31.71	21.01

This table gives a large mortality from phthisis during the first year. The minimum occurs between five and fifteen years of age. The liability to death from consumption increases in man from puberty till seventy years of age. Roundly stated, the minimum individual risk is at seven years of age, and the maximum at seventy. Women are more frequent victims in childhood. These interesting figures are sustained by the investigations of Lehmann, in Copenhagen, and of Schmitz, in Berlin.

HIGH AND LOW LIFE AND LONGEVITY.—Riches add ten years to life, if we are to believe an essay read before the Association of Hygiene, at Berlin, by Josef Körösi, director of the Bureau of Statistics at Budapest. He divided the people of his city into four classes, according to their worldly endowment, from the abjectly poor to the very rich. The rich class averages fifty-two years of life. The middle class averages forty-six years, and the poor class forty-one and a-half years of life. He also finds that the influence of poverty upon the occurrence of

epidemic infectious diseases is not uniform. In general, the well-endowed, except the very richest, are more seriously afflicted than the poor. The diseases which more commonly affect the poor, are cholera, small-pox, measles, and typhus, while the aristocratic diseases are diphtheria, croup, whooping cough, and scarlet fever. Infectious diseases are, as a whole, 60 per cent. more prevalent in the cellar homes than in high life. Diphtheria and scarlet fever show a decided aversion to downstairs life. Croup is less at home there than measles and whooping cough. All diseases are not affected alike by cellar life. Again, considering three, four and five persons per room as over-crowding, Körösi found that measles and whooping cough are greatly increased by over-crowding, while scarlet fever and diphtheria are not affected. The increase for measles was found to be 364 per cent. in houses with more than five persons to a room. This fact awakens questions regarding the method by which these diseases propagate themselves.

EARTHWORMS AGAIN.—The science column of the *Independent* reports as one of the most remarkable scientific discoveries of the day, that of Miss Adele Fielde, formerly a missionary in China. Miss Fielde found that the common earthworm, *Lumbricus terrestris*, after its head has been cut off, has the power of regenerating the whole of the dismembered portion. She recounts her experiments with great minuteness. Many incidental facts were discovered during her investigations. "For instance, no worm lived more than a few hours when exposed to the air, but they would live in water from eleven to fourteen days, when the water was changed daily, a very little air seeming to be necessary to support their lives. This explains why worms can live in the earth for days saturated by water during heavy rains. Eight posterior segments of worms, of from twenty to thirty segments, during forty days of observation, did not lengthen at either end, but increased in length by the growth of new half-segments between the others. The brain of the earthworm lies in the third anterior

segment; nine worms, from which five anterior segments were excised, so that only the brain, but the œsophageal collar, was removed, were not only alive at the end of forty days, but a part had wholly regenerated the excised parts. Ten worms that had not only had the five anterior, but from twenty to thirty posterior segments removed, at the end of the term, were found to be regenerating the excised portions. Very minutely she describes the daily process by which the creature proceeded with the regenerative work. At the end of fifty-eight days she produced a worm which had been decapitated at the fifth anterior segment, which had completely restored itself, having in that time reproduced completely the brain œsophageal collar, and the sub-œsophageal ganglion, all of normal size and in the normal site."

AN INTERESTING FOSSIL.—It is stated that Herr Lindström, a Stockholm geologist, has found a perfect fossil scorpion in the Upper Silurian rocks of the Island of Gotland in Sweden. The cuticle can be distinguished, also the dorsal plates of the abdomen and the cephalothorax. The surface is quite similar in appearance to the scorpions of to-day, and its organization proves it to have lived on land and breathed air. It has been called *Palæophonous Nuncius*, and is evidently one of the most ancient of terrestrial animals, the libelules found in the Devonian formation of Canada having hitherto been esteemed the oldest known. It is remarkable that the four pairs of thoracic claws are thick and pointed, like those of embryos of several other tracheates and campodea, a form of claw which does not exist in the known fossil scorpions of the carboniferous era, which in their appendages resemble those of to-day.—*Christian Advocate*.

GREAT men should think of Opportunity and not Time. Time is the excuse of fertile and puzzled spirits. They make Time the sleeping partner of their lives to accomplish what ought be achieved by their own wills.

OBITUARY.

ONCE more our page must be marked with the dark lines of mourning. Another member of the Science Association has gone over to "the great majority," and again it is one of the Association's most useful and most promising men that has fallen. "Whom the gods love best die young," said the ancients, and there seems to be a truth in the statement when exemplified by the death of Mr. Edgar J. Leary. Although but 23 years of age, he was a junior in the University, had taken an honor course in science and obtained high standing. He had also secured a footing and done at least a term's work in connection with the Toronto School of Medicine. Possessing a strong physical frame, a mind that loved intellectual labour, and a kind and genial disposition that made him a general favorite, he would have done honor to the noble profession he had chosen, been an ornament to society, and a good to the world. Many hopes were destroyed, when he fell. Sudden, swift, terrible and unheralded came the death messenger. It came in the shape of an accident, that was as trivial, as its result was tragic. The failure of a catch to fall into its place in the cogwheel of a rack-lifter allowed the rack to fall four inches. This caused Mr. Leary to lose his balance and fall from the load of grain to the floor, twenty-five feet beneath. He was unconscious till death relieved him of his sufferings. We will miss "a hand that can be clasped no more;" we will miss "the human-hearted man we loved." He was a faithful friend. He was an independent, manly character. He was a humble Christian.

"And doubtless unto him is given
A life that bears immortal fruit,
In such great offices as suit
The full-grown energies of Heaven."

CHAFF.

TEACHER.—“Compare the adjective ‘ill.’” Scholar (thoughtfully).—“Positive ‘ill,’ comparative ‘worse,’ superlative ‘dead.’”

A DEALER in cheap shoes in his advertisement says: “Ladies wishing these cheap shoes will do well to call soon, as they will not last long.”

THE curtailment of an obituary notice is a delicate matter. Dr. Davis, the editor of the *Messenger*, says: “We once offended a brother by changing a sentence, and yet the only thing we cut out was the announcement that some old mother in Israel had died of *cholera infantum*.”

REMARKABLE SCIENTIFIC FACTS.—You can’t turn a crank in the right direction. The first thing in a boot is the last. Universal experience has shown that we always put on the *left* shoe last. Why? “Misfortunes and twins never come singly.” A tailor suits his customers best when he gives them fits.

THE following is a *bona fide* obituary notice published in one of our provincial papers, written by a local poet:—

“Lines on Adam Hodgkinson, who was drowned in the Thames, at Ingersoll, June 27th, 1885, he being one of a family of sixteen, fifteen of whom were sons:

“Annually the River Thames
Its tribute numerous victims claims;
In spots it harmless seems to run,
It seized upon young Hodgkinson,
The fourteenth son of his mother,
And still unto her another
Son was born, but fond mother’s heart
It sadly grieved with one to part.”

ENTRANCE EXAMINATION CURIOSITIES.

- A. “I dare do all that may become a man;
Who dares do more is none.”

Translations by Entrance candidates:—

1. A man must do all he can, or he is no man.
2. I can do as much as anybody else, and I am no man.
3. He is not a man at all unless he dares to be a man.

4. A boy must do his best, or he never will be a man.
5. All men must do as much as I dare, or they are not men.

B. Compare *better*.

1. Better, best, worst.
2. Better, best, most best.
3. Better, worst, best.
4. Better, badly, magnificent.

C. Write a letter to a friend describing how you spent Arbor Day.

1. You ask me to write a letter on Arbor Day. We live in the country, and have neither ships nor harbors.
2. DEAR MARY,—We had a big Arbor Day prying stones out of the school yard, and then went to our supper.
3. The trustees gave us ginger-pop for cleaning out the yard.

D. *Question*.—What was the cause of the trouble between Charles I. and his Parliament?

Answer.—When King Charles had a Parliament he wanted some money and they wouldnt give him any unless he signed them a law they wanted him to and he wouldnt signe it and he got mad and layed down on the floor and rolled over and kicked, screamed and tumbled round at a great rate and at last he signed it and they granted him some money.

Question.—Show how England and Scotland came to be one kingdom.

Answer.—They was a man who used to stop in this castle and he had a girl he used to go and see at the foot of the castle and he used to go in the night and he had a road down the rocks which he knew quite well and he told the English that he good take about 30 men up those rocks at night when they were all asleep and take the castle and he done it and took the castle of Edinburgh and so Scotland and Eng-land became one kingdom.

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