

1st pg missing - The printed matter hereon follows
the last pg of writing - see it.

pitch. Now the subject of Education, though vitally important to the public, is so grave and severe, so unfavorable to the display of wit and humor that I am inclined with some trepidation to shirk the responsibility of bringing it forward. Let a large measure of that responsibility rest on the daring official, who when he invited me here settled both my task and my topic.

To begin with every scheme for Education, whether common or higher, liberal or stinted, takes its shape from one of two conflicting

theories, and, consciously or unconsciously, the value of every study and every course of studies is reckoned by reference to one of these as a standard of measurement. Of these theories one is old and prevalent, the other new and aggressive. The old takes a simple inventory of the intellectual powers and regards their symmetrical development the supreme good. The new casts the inventory of powers aside as worthless, catalogues the actual outgoings of intellect and declares that the supreme good is a capacity to meet the demands and emer-

gencies of the future. The old forms vaguely an ideal of intellectual perfection and counts those educating forces only as genuine which strive to turn this ideal into the real. The new recognizing the inevitable imperfection of intellect; ~~of intellect~~ admits those processes only as genuine which give it the highest attainable fitness for its inevitable activities.

The curricula of the old are furnished as mere mental gymnastics whose chief purpose is to confer a wide and well balanced strength without ref-

erence to its subsequent applications. The Curricula of the new are mere selections from the wide area of human knowledge with a reference simply to their bearing on the coming employments and duties. The knowledge therefore prescribed by the old embraces largely the past, the remote and the ideal, while the knowledge chosen by the new comprises the present, the immediate and the real, in short the very things with which human life comes daily and hourly into inevitable contact. Regarding man like the verb of ~~old~~ Murray as destined to

be to do and to suffer, the old would prepare him to be and let the doing and the suffering take care of themselves; but the new would fit him to do and to suffer, declaring that in God's arrangement as revealed both by history and experience, it is the doing and the suffering that gives to being its cast and character.

How to say that one of these theories embodies while the other lacks, all of wisdom in plan and purpose, would be an unwarrantable statement. The old theory develops values all along the line of its efforts but the full orb

Culture which is its final goal, is forever beyond its reach. It is quite impossible to gain a knowledge of things so remote in time or space, that it will not touch our actual life in some of its infinite phases. Drill among the stars and you will not get beyond the law which compels you to adjust every step you take on this insignificant planet. Ponder even on the quarrels of the fabled gods and you cannot fail to derive therefrom a fresh impression of the sweetness of domestic peace.

But the end which

the ancient theory proposes is, as
 I have said, beyond the possibility
 of attainment. The ideal of an
 intellectual discipline which is
 full, rounded and complete is
 an object lofty and fascinating
 but utterly delusive. It is indeed
 an ignis fatuus so brilliant as to
 be often irresistible. Full orbed ed-
 ucation, symmetrical manhood
 &c are mouth filling words which
 smite the ear with a sonorous mel-
 ody hard to withstand. Alas!
 that synonyms of such towering
 import should designate the mere
 phantoms of fancy. Alas! that a

Conception so grand should be so
 out of joint with the methods and
 products of Nature. With her Count-
 less divisions of labor, with the effects
 of use and disuse transmitted
 through a hundred generations,
 Nature has brought out and solidi-
 fied in endless diversity, intellectual
 aptitudes which no system of train-
 ing can reduce to harmony with
 faculties less prominent. One might
 as well attempt to turn the Mississippi
 backward from the ocean or to level
 the Rocky Mts. with a hoe. The old
 theory in perpetual war with Nature
~~exists then special prohibitions in~~

the universe, is an absurdity of the past. Mind is measured now, not by its possible powers, but by its actual achievements. Great men are great only in specialties as Hamilton in Metaphysics, Newton in physics, Huxley in Anatomy, Bismarck in politics, Lucretius in poetry. Biography is nothing but a record of triumphs in single departments of human labor, and it is by the aggregate of such that science and art progress. Was the telegraph, the phonograph, the power-loom, or the perfecting press the products of a broad and

evenly balanced culture? So far from it is the simple truth, that humanity has been lifted out of the gloom of barbarism up into the sunlight of civilization exclusively by the unyielding indomitable efforts of one sided men.

Enthusiasm, to which the world owes all its great treasures of practical knowledge, is mind under high pressure acting powerfully on single objects or a single class of objects. Ferrier is giving his life to the physiology of the brain and it is through his experiments that we are coming at last to

Know something of that wonderful organ. Paley is devoting all his days to a scrutiny of the forms and habits of insects and it is through such labors as his that we shall find means finally to destroy these enemies of industry. Throughout the whole realm of mind as of matter concentration gives to strength intensity and effectiveness while the widening of effort brings dissipation, weakness, and waste.

The old theory, unmindful of these obvious facts, educates the student in many cases away from the pursuit

he is to follow and thus enfilts him for the life he must inevitably live. Even if a full orbed education were possible it would be valueless, for the possibilities of mental power are wider than the real activities of life. A portion, therefore, of the intellectual powers that were broader than these would lie dormant from lack of incitements.

The new theory on the other hand takes careful account of all these facts and concedes to each its real and relative value. It regards action as the great end of life and

proposes as its chief object to adjust
 precisely the training to the toil.
It would give ^{such} disciplined strength
 that the heavy task should be
 lighter and the inevitable bur-
 then more easily borne. It would
 so prepare the student for the
 coming struggle that the struggle
 all along his pathway shall be
 crowned with triumph. It would
 lift men out of the slough of
 drudgery whether manual or
 mental up into the purer atmo-
 sphere of intelligent effort. It
 claims that this is the highest ob-
 ject in educating the young. Its

end is the useful, the practical, the attainable, but it lacks the grandeur of purpose which the old education proposes yet fails to reach. But a real good however lowly is better than an imaginary good however lofty. A lot in Iowa City is of more value than a whole County got by purchase from the Man in the Moon. It certainly pays better to kill a prairie chicken in the proper season with a shot-gun than to fire a cannon of the heaviest calibre at the planet Jupiter however well aimed. The values in human life whether individual or ag-

gregate consist if I mistake not
largely if not solely in the fruits we
are able to gather and that system
of antecedent training is the truest
which prepares us most completely
for successful gathering. For in
the supplying of human wants ma-
terial and social esthetic and moral
lie beyond all question the highest
good.

Let no man say that ^{such} this
^{an} new Educational Creed applied to
practice makes men sordid and
narrow and selfish, absorbed and
skillful in the winning of bread
and butter but indifferent and

torpid in respect to his higher necessities. Such an assertion might be true ~~if the New~~ ~~crud~~ should take no account of the uniform duties that run parallel with professional labor. Labor is the prime agent in the world's advancement. Thank God for work, work of the hand and the eye, the muscle and the brain. Thank God for work. It has redeemed the earth from a desert. It has made the barren lands productive and fed the famishing millions. It has dotted the shores with great cities and blent them into one. It has

cleared the wave of every sea with
 the prow of the merchantman,
 and given to every land the best
 products of all the rest. It has Com-
pelled inert-matter to do its
 drudgery and made even the un-
 fruitful waste to blossom into
 beauty. Without work the earth
 would be a wilderness given over
 to sterility and man with the
 brute of his nature uppermost
 and the angel crushed would
 become a hopeless and heartless
 savage. Thank God for work for while
 it covers the earth with abundance
 and beauty it crowns the worker with

intelligence and power. For the one great educating force in science, literature, art and industry, whether in the schools or out, is successful effort.

But further if the student is to be disciplined for what he has to do, in other words if the boy must study what the man shall practice then the first step in the perfecting of a system of education is to make an exhaustive inventory of the activities that in the order of life will follow the preparatory period; and these will be found, on inspection, to consist of those inevitable efforts without

which society would perish and those efforts which depend on the choice of a vocation.

The first class of activities which are common to the race may be stated in the order of their urgency which stands inversely to the order of their dignity.

1. The maintenance and security of personal life and health both of body and mind.

2. The maintenance of the family as the foundation of the state, including the training and welfare of children.

3. The maintenance of society

by all the innumerable acts of kindness and sympathy and help which spring from the relations of man to his fellows.

4. The maintenance of government and the state, the securing of justice, the making and sustaining of the laws.

5. The gratification of the esthetic feelings, the pursuit and production of beauty, the love and creation of art, the desire for fitness, propriety, symmetry and order.

6. The perception and maintenance of right and the expulsion of

wrong, the recognition of higher laws of duty and moral obligation, the feeling of imperfection and dependence and the finding of an infinite creator! the making of this life by the practice of its higher duties a means of preparation for another.

First let us note the fact that the programme of our entire ~~of~~ activities which I have proposed differs in vital particulars from the scheme announced as the basis of a practical education by Herbert Spencer some twenty years ago.

For this distinguished writer takes into his first order those efforts of

self-preservation, which being ^{instinctive} ~~instinctive~~ need no formal training.

Moreover making the promptings of our esthetic nature, our love of the beautiful, the highest field of human action, Spencer thus leaves out, with a wonderful obliquity of philosophic vision, our perception of right and wrong, our conception of God, our sentiment of worship and the immortality of the human soul. This singular but celebrated catalogue of human actions makes man a sort of lofty animal whose wants are wider and more varied by reason of a more complicated

organization but whose life, like that of the kindred brutes that perish, ends in darkness and despair.

Could I believe that man's higher nature is a baseless fancy, that worship is a superstition, God a chimera and the hope of immortality the phantom of a dream, I would urge no longer the diffusion of knowledge but deplore rather the spread of human enlightenment, for ~~in the~~ establishment of the melancholy fact, wisdom would proclaim the oracle of Aedipus

"Mayst thou never know the truth
of what thou art."

and ^{for} ignorance alone, ignorance
deeper than barbarism would
hide the gloomy destiny which
fate assigns us and supply
the only antidote to perpetual
despair.

But let us turn from the
dark picture which Spencer has sug-
gested to notice that the six depart-
ments of effort which I ~~have~~ propos-
~~ed~~ as embracing the whole round
of human activity, are invariable
and to the true man unavoidable,
the only optional line of ^{exertion} ~~labor~~

being the vocation. It is true
that even in this nineteenth Centu-
ry not a few in some of these
spheres of action and growth,
attain to zero, but they are anoma-
lies or rather instances of intellect-
ual or moral distortion. Thus a
man will be provident in some
degree of such matters as his own
food and safety and health, un-
less he is an imbecile or an idiot.
A man will take on himself the
joys and responsibilities of
parentage unless he is a misan-
thrope an outcast or an eci-
le. A man will sympathize

witte and help his fellows unless
 he is a brute, will aid the state
 in protecting property and life
 unless he is a criminal or an
 outlaw, will learn and love
 beauty propriety and symmetry
 unless he is a Hottentot, will dis-
 cern and feel the dictates of duty
 and perceive an all prevailing
 cause for the innumerable ef-
 fects in and around him unless
 he is a fool. As a warrant for
 the seeming discourtesy of this
 last assertion, I will suggest
 in passing that it is only a quo-
 tation from Scripture.

It behooves us how-
ever to heed the fact—that though
no true man can be utterly tor-
pid in any of the fields which
my scheme embraces, so on the
other hand no man, however
rounded out in power and in-
tellect, can expend his energies
in divisions made with mathe-
matical exactness among them
all. For our activities vary as
life varies, vary with climate
and soil and scenery, vary
with surrounding influences
and the desires they beget, vary
with inherited proclivities and

the countless divisions of labor which nature demands. But in the midst of all these inevitable variations, twice happy is he whose life is radiant with the beauty, sublimity, goodness and truth which not only gather in rich profusion along his path, way but open out into boundless space.

A brief and rapid survey of each of the departments of effort above mentioned together with a few suggestions respecting the special studies that ought to precede them will bring

us at last to the consideration of the intellectual training needed for the industrial vocations.

A little reflection will reveal to every intelligent thinker that the preservation, health and safety of the individual is the very foundation of all the other divisions of action and duty. For the man who is too weak in body or mind to help himself, can give no effective help in the rearing of children, the upbuilding of society or the sustaining of law, and he will moreover be very likely to show corresponding feebleness in his esthetic and moral perceptions. To the

Wretched invalid all the values to be
 won in the upward struggle, turn to
 ashes. The wasting disease, the rack-
 ing pain, the absorbing consciousness
 of self, and a gloomy foreboding
 of the end have always the effect
 to pall the desires and to paralyze
 the faculties. In fact ill health in
 just the degree of its intensity and
 duration is mental incapacity and
 inertness. Even a fit of dyspepsia
 will for a time change the joys of
 life to gloom, turn the affections in-
 to gall and clothe the very heavens
 with blackness. And then it is fit
 to be ascertained how far moral

evils are born of physical ailments. Disease is the prolific mother of antipathies, ill tempers, suspicions & spleen. To the jaundiced eye the whole world is bilious and bad. Somebody has said that half the wrong doing in life finds its roots in a torpid liver or a disordered stomach, which is probably the overstatement of an active principle in morals. At any rate good health, the full unimpeded action of all the organs, the free and harmonious play of all the vital forces, is a treasure which makes the other treasures of life attainable, but without

Which all other treasures become insipid, insignificant or valueless.

The maintenance of health and soundness of body and mind being fundamental ^{in life} it follows with irresistible logic that the knowledge of its laws should be made fundamental in education. In other words those principles should be taught the child most carefully which touch, with unerring certainty and vital effect, the whole life of the future man. And the plan of instruction should comprise and present all those sanitary laws by which maladies are escap-

ed, dangers avoided, strength developed and life prolonged to faintest verge. It should embrace those elements of anatomy, physiology, physics and chemistry which underlie the facts it furnishes. It should teach how the germs of disease are engendered, developed and can be destroyed. It should show how the whole brood of hideous infections have been hatched by folly and nurtured by neglect; how the atmosphere which is in perpetual ^{contact} with the lungs and the skin, breeds perpetually a host of dire diseases

which a little practical science
 can drive away. It should
 teach that dirt and dissipation
 overwork, exposure, excessive
 grief ~~and~~ gluttony and kin-
 dred vices are the full destroyers
 of physical soundness. And
 that temperance and moderation
 in food and drink, the proper al-
 ternations of ~~food~~^{work} and rest, equa-
 ble temperature, comfortable
 clothing, pure air, calm passions,
 a clear conscience, sound sleep,
 and soap and water are its
 sure preservers. Let it teach how
 to work so that while the worker

enjoys his constant fruits, the
 decades shall come and go and
 find him still working. So that
 when the lapse of many winters
 shall have wreathed his crown
 of snow, he may be able to contin-
 ue his work to that inevitable end
 which in joy of work ^{he must as one} will ~~do~~
~~who~~ wraps the drapery of his couch
 about him and lies down to pleas-
 ant dreams." All this should be
 taught and much more for
 which, alas, the adequate text-
 book has never been written.

Approaching now the
 parental ^{relation} ~~relation~~ we cannot

suppress a feeling of deep concern that duties whose right fulfillment is of such surpassing importance to human welfare, should be utterly ignored in our educational systems. So far from giving to youth any instruction that will fit them for responsibilities which, in the order of nature, they will one day assume, teachers are reserved and silent respecting the appalling fact that in the hands of the youth they teach, will be placed as the fars go by, the training of body and soul, the shaping

of the very destiny of ^{the} generations
that follow them. Shame on our
puling sentimentality that
averts the face and closes the
lips on matters of such tran-
scendent moment. Far manlier
would it be that we should listen
to the appeals which helpless
childhood is making, in piteous
accents, against parental folly,
all over the land. Health, habits,
conduct, manners, morals, all
that enter into the final manhood,
are inevitably shaped at that
period of life when the plastic
soul is either molded into beauty

or marred forever. What-evil beyond repair is wrought when such tremendous interests are committed to careless incompetent-hands. What innumerable hosts of children go straight to physical wreck or moral ruin ~~either~~ from lack of judicious control, from criminal neglect, or from that excessive indulgence wherein intended kindness is real cruelty. Add the millions of instances where a depraved or suffering manhood is the sure out-come of an ill-guided childhood. Let our full precious end

asylums and the overcrowded hospitals in our great cities bear witness to the melancholy fact. Far happier for the little ones whose tiny graves dot thickly the cemetery and the churchyard who died the victims of parental ignorance.

And where is the cause of of this great crying sin against humanity unless it be in a system of education which is fatally defective just where its results are most vitally important. And where is the remedy unless it be a thorough antecedent training in all the

principles which secure the well-being
of childhood and in all the laws
which from infancy to manhood
govern the physical and mental
evolution?

~~Commence~~ Entering upon the third
and fourth divisions of human effort
which lie in the inevitable play of the
social sympathies and the intuitive
perception of human rights we con-
template man's duties as arising
from his relations as a unit to
that aggregate of units called Society
and that protection of the unit
against the aggregate, called
government. For man as a social

being acting under the law of social gravitation and man as a subject of government organized to control his savage instincts, are so nearly related that we may consider them together. And first it will be conceded without hesitation that the many and various duties based on the brotherhood of man will, other things being equal, be completely performed in a ratio to the completeness with which we appreciate them. And it will be as readily conceded that the citizen finds the greatest

obstacle to right action in a lack of the specific knowledge on which it is based, and that throughout history from Cain to the Communists, ignorance and all its imps have arrayed themselves against the triumph of justice and law. Benevolence, friendship, patriotism and philanthropy, central social virtues, are certainly stimulated to healthy action by an acquaintance with the principles which underlie them and a vivid perception of the fact that not only honesty but all the practical virtues are the best policy leads per

petually to call them forth. The true old maxim that the intelligence and virtue of the people are the only safe basis of a republican system, ought to mean the special virtues and the special intelligence which our obligations to the state bring into exercise. Beyond all question there is a wide spread absence of that particular kind of knowledge involved in the discharge of our political duties. And the elements of psychology, social science, political economy, and constitutional and statutory law offer their treasures to fill the hungry

void. With such knowledge ap-
 plied to the present occasion, a
 citizen would deposit his vote
 from a full apprehension of
 the principles involved and
 not from the prompting of base-
 less prejudice. A knowledge
 of the incidents in the march of
~~Cyprian~~ ^{Genealogy with Dr.} to the sea is good. A
 knowledge of the incidents in
 the march of Sherman from
 the Mississippi to the ocean is
 better, but the knowledge of laws
 necessary to guide us in our
 immediate and inevitable du-
 ties to our fellow men and the

Country is best. Good, better, best.

I am far astray both in my logic and my creed, if in this short life of ours our system of education should not invert the grammatical order. For education like charity ought to begin at home.

Feeling deeply the want of text books and enthusiastic teachers in this great department of practical study, I venture to append a few fragmentary precepts as specimens of the lessons that ought to be ground into the minds of every boy and indeed of every girl in the land.

1st-

There is no conflict between manly

independence and genuine authority
 for genuine authority seeks only the
 good of the governed. Give it therefore
 a ready obedience. Love justice, rever-
 ence the laws, respect the rulers and
 "honor thy father and thy mother that
 thy days may be long in the land
 which the Lord thy God giveth thee."

2nd

That the highest happiness and
 prosperity is in the reign of peace
 on earth and good will to men, is
 true of individuals as of nations. Sub-
 tract all hatred and strife from the
 sum-total of life's values. Fly rather
 than fight - unless the truth and right-

shall suffer. In such case "Lay on Mac-
duff, for thrice is he armed who hath
his quarrel just."

3^d

Treachery recoils finally and surely
upon the traitor. All machinations
"return to plague the inventor. Curses
like chickens come home to roost; and
the deepest social philosophy is
the Golden Rule.

4th

In the reign of universal falsehood
society would perish. Not even a sav-
age tribe could survive. A liar there-
fore is not only his own enemy but
he is an enemy to the race.

5th

The sacredness of the right of property is not only a safeguard to life's values but to life itself as well. Communism which plots its overthrow, would not only bring frightful and bloody anarchy but it would turn civilization backward to the quadrumanous ancestor which Darwin assigns us. Defend then with life long constancy the right of ownership and touch not that which belongs to another even with the tip of the finger.

6th

Time is money but time is not money alone; it is health, power.

wisdom, refinement and moral growth. Therefore he who squanders time squanders the source of all the attainable treasures.

7th

Unlimited credit is the parent of business panics. Debt enslaves the debtor. A mortgage is not an ornament which beautifies the homestead but a dragon that devours it. Industry is generally thrown when it wrestles with a high rate of interest. If thou hast but a crust sweeten it with the reflection that it is paid for.

8th

Page 53 of the original written speech is missing.
The following text comes from the published speech.

Money to be a perfect measure and
medium in the exchange of other values,
must have invariable value in itself.
A paper dollar will purchase an amount
of other commodities varying in
proportion to the certainty that it
will pay its own face in gold or silver.
No power on earth however despotic can
drive into circulation currency whose
righteousness is only as filthy rags.
Frequent deviation in the value of the
circulating medium is death to business.

Human wants beget labor. Divi-
sion of labor begets skill. Skill be-
gets values. Values beget exchange,
and freedom and safety are
the guardian angels of the
entire pedigree. Free labor, free
choice of vocation, free products,
free exchange, these are the as-
cending steps to material salva-
tion, and whether to individuals
or to nations, the steps are the
same. All value is the product
of labor. Add their own modifi-
cations of value to the aggregate of
values in the world.

It is needless to say

how sadly destitute is the average American citizen of that kind of knowledge on which the well being of society and the sovereignty of law depend. Of the science of the government we help to sustain, of the principles which underlie our social life, of the nature of the money we earn and spend, of the very constitution and code under which we live, of the laws that by controlling industry competition and commerce, control the very pursuits we follow, of all these and much more, there is a prevalent and appalling ig-

norance. An ignorance which has more than once burst out into a defiance of law and left death and destruction in its wake.

An ignorance which, if it can but gain organization and leadership, will one day grind this government to powder.

What luminary shall dispel the darkness that threatens us?

What but the teacher, the teacher at the hearth, in the editor's chair, in the pulpit and on the rostrum but beyond all and above all the teacher in the school room when with philosophic wisdom,

He adjusts his work to the wants of the world.

On the Fifth division of our activities embraced in our irresistible efforts to find and form the beautiful we need not dwell. Through all our waking hours the eye unconsciously gathers in the fascinating shapes and colors which lie in profusion around us and the ear is constantly alert to catch the melodies with which the air is filled; and no ears or optics are so poor as not to gather beauty enough to constitute a portion of life's joys. But man being essentially creative molds the elements of beauty which

(See printed matter on page 2 hereof.)

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pitch. Now the subject of Education,
though vitally important to the
public, is so grave and severe, so
unfavorable to the display of wit
and humor that I am inclined

joys. But man, being essentially creative, molds the
elements of beauty which the senses collect, into new
ideas which find their expression in art; and poetry,
painting, sculpture, music and landscape gardening
exist as a consequence. These in turn, together with
the attractions which nature presents, appeal con-
stantly to the æsthetic feelings and tend with sure effect
to call them forth. And these, or some of these, are
the materials with which the teacher incites the pupil
to the attainment of that measure of taste and refine-
ment which comes into exercise in every true life.
Happy is he who in this department of instruction

shall give the youth such training as is not discordant
with the things he has to do. The absorbing study of
fiction and poetry, though clothed in classical diction,
is not a fitting antecedent to the after struggle; and
painting, French, and music, given without ~~sight~~ in
our fashionable schools, furnish a poor preparation
for the duties of motherhood. For strength that is
rough even, is better than a refinement that is weak,
and in practical character efficiency counts higher than
finish.

To begin with every scheme
for Education, whether common or
higher, liberal or stunted, takes its
shape from one of two conflicting

theories, and, consciously or unconsciously, the value of every study and every course of studies is reckoned by reference to one of these as a standard of measurement. Of

We must be content also to epitomize with a single touch that culminating portion of our efforts which reaches out toward right and duty in the finite, and perpetually responds to goodness and truth and love in the infinite. The idea of the infinite in time and space and goodness and power which the human mind certainly holds, is a positive proof of its immortality, unless we adopt the absurd alternative that the idea contained is greater than the mind that contains it. And if we are free agents, the subjects of a moral government, accountable to God, the Governor, then it becomes of unspeakable consequence that we should know exhaustively the laws by which we are governed; and if every moral act we perform, besides its clear effect on our happiness here, fits or unfits us for an infinite hereafter, and if such acts be influenced by the acuteness of our moral perceptions, then the training of our moral perceptions is important beyond the grasp of language.

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ty to meet the demands and emer-

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evitable ~~of~~ ~~into~~ ~~only a~~ ~~highest~~ ~~inevitable~~ ~~activities.~~
 There is reason to believe that moral character takes its shape earlier in life than many suppose, and the parent as a moral teacher is consequently the first and by far the most responsible. The pulpit would give more effective help in this direction if its ministrations were better adapted to the wants of the growing mind. It is morally harmful instead of helpful that children should be compelled to listen to sermons which being addressed to maturer thinkers, are above their intellectual reach. Rev. Thos. K. Beecher preaches once a month to the children of his flock who listen with eager interest, and if such moral nutrition could be given all over the land it would bring tidings of great joy to the little ones.

The Curricula of the old are furnished as mere mental gymnastics whose chief purpose is to confer a wide and well balanced strength without ref-

erence to its subsequent applications.
The Curricula of the new are mere selections from the wide area of human knowledge with a reference simply to their bearing on the coming employments of the child. The knowledge therefore embraces and touches the chosen present real, which human life comes daily and hourly into inevitable contact. Regarding man like the verb of ~~old~~ Murray as destined to

It is sad to note how little in this line of transcendent duty, we ~~who are teachers~~, actually accomplish compared to what we might. If moral philosophy were brought from the summit of abstract statement down to the common level of concrete examples so administered as at once to sharpen and satisfy the child's moral appetite, and farther, if all the forces of the school room, whether conscious or unconscious, were adjusted to suit the conditions of a right moral training, the fruits we should gather would be increased an hundred fold. God help us! The harvest is great; genuine laborers are few and in its gathering they use, I fear, the old bungling tools when the improved implements are within their reach.
(To be continued.)

be to do and to suffer, the old
would prepare him to be and let
the doing and the suffering take
care of themselves; but the new would
fit him to do and to suffer, declaring

(Continued from page 43.)

I cannot leave these sections of human activity which together go to make up the sum total of a complete human life, without pointing to the fact that, as the special sciences I have named are preparatory to each, so language and mathematics are preparatory to them all. In our waking hours, in all our lives, whether personal, public, æsthetic, or spiritual, language answers the countless demands of expression and intercourse. In all the endless collisions of will and feeling, opinion and thought, it is the chief instrument, and skill and readiness in its use are consequently of the highest moment. But I venture the suggestion that linguistic studies should begin with the language we speak, and only after its thorough compassing, should progress outward to the best specimens of foreign tongues. For the best method of learning to work a machine is by the careful scrutiny of its own levers and wheels. And, oh, that some genius would arise to construct a perfect system on which our youth could study exhaustively the structure, the rhetorical forces, the wealth of synonyms, the classic poetry, and the literature of our noble vernacular.

that in G... revealed
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Culture which is its final goal, is forever beyond its reach. It is quite impossible to gain a knowledge of things so remote in time or space, that it will not touch our actual life in some of its infinite phases.

Quite as close to our daily walk in life and covering all its sections of movement, are the immutable facts which mathematics embody. For every event occurs in time; every body is enclosed in space; every effect is due to its cause; every object is one or more; every quality resides in substance, and so the finite in all its phases rests everywhere on the infinite—the infinite in time, and space, and number, and power. We cannot move the memory or make one mental picture; we cannot open the eye, direct the ear, or raise the finger, without contact with these all-embracing mathematical truths. For they are the inevitable back-ground against which every thought and perception is painted.

Small and you will not get which compels every step you take significant planet. Powder even on the quarrels of the fabled gods and you cannot fail to derive therefrom a fresh impression of the sweetness of domestic peace.

But the end which

the ancient theory proposes is as
I have said, beyond the possibility
of attainment. The ideal of an
intellectual discipline which is

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Coming at last to the vocations which embrace both the professions and the industries, let us insist, in the first place, that the antecedent fitting for these, which a reasonable education should give, ought to harmonize with, and not supercede the preparation for the complete living I have sought to urge. For herein perhaps lies the narrowing tendency of a merely technical training. The Congressional law which founded the national industrial schools, requires, wisely as I think, that the education given therein should be both liberal and practical. For, as no man should be so absorbed in his special pursuit as to ruin his health, neglect his children, shun society, ignore his country, blunt his finer sensibilities and paralyze his conscience, so no education ought to give a special fitness for the pursuit without a fitness for the activities incident to our common manhood. It is indeed hard to conceive how helpless and hopeless would be his case, who should gain great artistic accomplishments without any practical wisdom in the duties which spring out of the innumerable contacts of daily life. The architect might attain a special ability to plan the noblest structures, yet if his knowledge was limited to his art, his home might be desolate, his children go to ruin, his property become the booty of the sharper, and he himself be victimized by relentless monopolies and oppressive laws, without the ability to raise a finger in his own defense.

Alas! that synonyms of such towering
import should designate the mere
phantoms of fancy. Alas! that a

conception so grand should be so
out of joint with the methods and
products of Nature. With her count-
less divisions of labor, with the effects
of use and disuse transmitted

Nevertheless, the need of a special training in the facts and principles that underlie each line of industry, is so urgent that it cannot be overstated. The vast annual losses to the country which spring from lack of industrial education, baffle all attempt at numerical statement. The values that go to waste from incompetent farming, the destruction of life in our cities from defective ventilation and drainage, the wholesale slaughter which follows defective rail road engineering, are mere trifles compared with the sum total of yearly loss in life and money born of technical incapacity. The \$50,000 which, in laying the walls of the new capitol, Iowa sacrificed to the ignorance of a blundering architect, is an insignificant fraction. You must reckon the orchards in half a state destroyed by reason of unsuitable varieties selected for planting. You must count the thousands of thorough-bred animals swept off by diseases which science could have cured. You must estimate the lack of beauty and comfort in the ungainly structures that dot the whole land. You must measure the vast areas so desolated by insects as to become a desert.

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The following text comes from the published speech.

All this and more must you gather in before you can feel the urgency of the demand for entomologists, architects, veterinarians, horticulturists, engineers and the like. We have carpenters, blacksmiths, farmers, and mechanics enough. Nineteen in twenty of the whole population are given to industrial life. The great crying want is for master workmen. That science alone can furnish the means for the training proposed it is needless to say. To the farmer, a knowledge of the nature of plants, the chemistry of soils, the habits of insects, the laws of breeding, and the remedies for disease, would not only beautify his life and dignify his labor, but would double its products. The architect and the engineer, whether mechanical or civil, should climb to proficiency in their arts up through algebra, and geometry, trigonometry, descriptive geometry, calculus, physics, and when, after years of special study, drafting and practice shall follow, they shall reach the summit of their profession and join the few whose works are gladdening the earth with plenty and beauty. Thus we finish our evening task and gather up the threads of our rapid discourse into the final conclusion that when we educate the youth for a personal self that is strong and efficient, for a father who shall be watchful and loving and true, for a friend that is faithful and steadfast, a patriot that his country may rejoice in, a lover of all the forms of beauty that earth presents, a defender of right and truth in the finite, a worshiper of goodness and power and love in the infinite, and when we superadd to these all needed learning and skill in the work of his hands, then we reach and realize at last the ideal of a reasonable education.