

Address by Dr. A. S. Mellen 27 yrs after entering
Mich. University, on occasion of receiving L.L.D. degree.
(He was grad. of M.U. 1st class about 1846?)

I am animated by no com-
mon feelings as I publicly give to the
University and to you my filial and
fraternal greeting. I bring back through
the years that have separated us the
same hopes unrealized, the same
yearnings for the excellence I have
never attained that I once cherished
here, but I bring also an unquench-
able interest and pride in the success
that has enabled this institution to
take rank among the first in the
land. Twenty seven years ago I crossed

the threshold of one of your buildings
and received reverently my first lessons
from the pages of Livy and Legendre.
Nearly all the numerous chairs now
filled so worthily were then vacant.
Two regular professors ministered to
the intellectual wants of some forty
students who domiciled within the
buildings ~~and~~ made salutes upon
the city for their material sustenance.
The honored name of one of these early
professors, a man of singular ability
and classical learning "has been carved
for many a year on the tomb." The other
preserved for a long and useful career

has stood by the University in all her vicissitudes and watched over her progress from the germ to the grander harvests. I have since endeavored to discharge to others whose needs were similar to mine the debt of gratitude which I owe to him for many instances of personal kindness and encouragement. Important events which memory restores marked the period of which I speak. That year the Alpha Kappa was born and christened. That year the Phi Phi Alpha seeded storm.

ily from a Union that was never
restored. A year later the enthusiasm
of Houghton was extinguished in
a watery grave and his vacant
chair filled by one who has, in the
lapse of time, built up an analyt-
ical laboratory the largest if I
mistake not on this continent. But
Why should I rehearse further the el-
ements of a history familiar to most
of you as household words. It is
enough to say that the University
passed through the tribulations
and struggles inseparable from the
infancy of every like enterprise and

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come out with garments unsoiled
from them all. No animosities,
no sectarian influence or political
rancors, no conflict of opinions or
policies without or within has ever
been strong enough to check seriously
her constant growth. To all such
disturbers of the unity of her higher
purpose she has cried inflexibly, "~~Q~~
Procul, este profani". Manitine fac-
ulties have changed. Able men
have come and gone. ~~Social~~ exite-
ments have sometimes reined their
thoughtless clamor but nothing
could withstand the devotion and

soil which have placed her at last
where she can neither be harmed
by individual defection nor greatly
helped by individual praise.

Now there can be no
doubt that this broad and per-
manent prosperity is due largely
to the fulness of her faculties and
the completeness of her equipment
but to my mind it is due quite as
largely to the fact that in the adjust-
ment of her courses of study she
has responded faithfully to the
wants of modern life. For the
University has as seems to me,

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specially in later years, assumed
the principle that intellectual cul-
ture is of the highest value only when
it prepares the student for his act-
ual work, in the actual world that
lies before him, and on the other
hand she has not been slow to recog-
nize the inferior worth of any knowl-
edge which induces habits of mind
that are out of harmony with life's
duties -

It is pertinent, therefore to
the occasion and the hour that we
should scrutinize with care those
branches of knowledge that underlie

the modern professions and industries and settle for ourselves as best we may their effectiveness simply as mental gymnastics. Any study is available as a gymnastic which furnishes a severe and systematic exercise for the intellectual faculties and thus prepares them for successful action.

Discipline is only a capacity for effective effort. It is valueless except when utilized and he who sinks it exclusively, either mistakes the means for the end, or proposes to himself a field of action which

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is vague, indefinite, boundless,
while he who seeks it in preparing
for a special pursuit trains and
concentrates his ~~his~~ energies for
definite action. He aims at a mark
on this earth, while patience and
practice will enable him to hit in
the centre, while the other shoots more
efftily but aimlessly towards the stars.

Since the accumulation
of scientific knowledge which every
modern profession and every modern
industry embraces and applies, is so
vast that human life is scarcely
long enough to gather it all it is of

highest moment that we should enquire whether the facts, the nomenclature and the processes it presents, have not variety enough to round the intellect into symmetry and beauty, and at the same time give special capacity for the allotted work. What precious years may be saved; what wasted effort economized; if we can give this question, truthfully, an affirmative answer. Mental discipline, let us premise, is not only power trained to action but is itself the effect of action repeated. When you say that an intellectual act, slow and

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painful and imperfect, at first, gradually by painstaking reiteration, becomes, at last, rapid and complete and pleasurable, you have a formula that embodies the whole subject. It is not then, to say the least, so much upon the character of the object or the process that disciplined ability depends as upon the faithful frequency and fulness of the acts that produce it. It seems singular that the learned world has hitherto held that intellectual discipline is an invariable result from the acquisition of knowledge, and that each branch of knowledge

confers, of necessity, an increase
of intellectual power peculiar to it-
self in quality and kind. As well
might one say that the anvil gains
bravery to the arm of the blacksmith,
whereas it is the exertion of continually
repeated blows alone that lends
hardness and power to the muscle.
In like manner it is not the knowl-
edge acquired, but the protracted
strain of the intellect in the act of ac-
quiring it, that brings intellectual
strength and acuteness. Disciplined
power is the consequence that flows
not simply from the matter studied

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but from the manner of studying it.
Given any science whose classifications
are wide and philosophical, and
whose deductions are logical and
rigid, and it becomes a true occas-
ion of genuine discipline only when
the student masters its difficulties
by an intense, long continued,
absorbing, all conquering effort.
No matter what objects any science
or literature presents to the senses +
^{or the imagination}
No matter how countless the facts, it
furnishes for memory to gather, or
how complicated the problems to be
analyzed and solved, it never did

and never will impart one iota
of valuable strength to the idler
who dawdles and drones over its
pages. On the other hand, whether
the subject of study be Mathematical
or linguistic, metaphysical or sci-
entific, if its abstruse processes be
met with a determined grapple
that never relaxes until it overthrows
the obstacle, then the accession of
intellectual power will be the inevi-
table result. There is far less differ-
ence then between the various studies
simply as instruments of culture
than is generally believed. But

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While every great branch of classified knowledge furnishes the occasions for the systematic effort that evenuates in culture, there is not one of them that can claim the solitary preeminence of a universal sympathy. No language however full its vocabulary or philosophical its construction, No science however numerous the arts that are based upon it can serve as a means of preparation for all pursuits or professions or a panacea for intellectual ills. The exclusive study of any literature though it stimulates the imagination

and gives quickness and variety
to thought, turns its channels
away from the innumerable forces
revealed in the Material Universe.
In the pure Mathematics when pur-
sued alone the mind converges on
a few only of its intuitive ideas
and in the absorbing contempla-
tion of their relations, isolates it-
self so to speak from the induct-
ive processes which constitute large-
ly the reasoning of real life. So al-
so a protracted devotion to any
science which presents its objects
to the senses, brings into disuse the

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power by which the mind scruti-
nizes its own processes and states.
The truth is, the capacities of the
human intellect are coextensive
with the wide variety of sciences,
literatures, and arts which it has
produced, and the study or group
of studies which could monopolize
the whole province of culture, would
need to contain something of the
matter, methods and classification
peculiar to each of all the others.
If no group of literatures or of sci-
ences can answer this plain con-
dition essential to an instrument

of universal culture then what
are the comparative values of the
culture to be gained through each
and will not the combination of
studies whose truths are directly
involved in our social, civil, moral
and professional duties, eventuate
in a culture sufficient for life's
highest purposes? In other words,
must the student acquire facts which
are extrinsic to his future activi-
ties in order to judge and reason
with ready accuracy, upon those
which are intrinsic to them?

A solution of the

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The first and most available in
the subjective series is language.
Being the exponent of the human
mind and exhibiting in the group-
ing of its elements the relations
and results of thought, it serves as a
perfect medium for the study of
thought itself. Now the accomplish-
ment of so important an object may
be sought either in the acquisition
of the most excellent examples of foreign
languages and literatures or in an
exact and exhaustive knowledge of
the vernacular tongue. The most
excellent of foreign tongues are beyond

question the Latin and the Greek. Let
us test their peculiar claims and ac-
cord to them their real values.

First they do not carry the mind through
the entire series of intellectual acts and
consequently the discipline they con-
fer has less of breadth than that of
the Natural Sciences.

Secondly they address the imagina-
tion and stimulate it to an intense
activity. The ^{voluntary} consequence is that if
the senses have been adequately train-
ed to supply the material, the imagi-
nation becomes exceedingly ready,
facile, and exact.

Thirdly it is justly claimed that the vast number of inflections which these languages present and their hosts of synonyms with precise meanings, will so task and train the memory as to give it reliable strength and quickness. Unquestionably this mnemonic training is of great value, but the training given to memory in the acquisition of the vast details of Natural Science is equal in amount and in quality even superior. For the inflections and the words of a language, are, when acquired, associated in memory by what

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May be termed accidental relations,
and can be held only by countless
reiterations, but the immense
particulars which constitute the
elements of Natural Science are
when attained, assorted and held
in Memory by Scientific connections
and ^{soon} assume ~~at once~~ therefore the
character of lasting acquisitions.

But it is perhaps chiefly because
of the immense variety of examples
for the exercise of judgment in
the reasoning processes, that the an-
cient classics assert their right to
the prominent rank they hold in

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the educational system. I yield
a ready assent to the ~~claim~~ ^{excellency} they
~~make~~ ^{claim} in this regard. The reasoning
employed in the Natural Sciences
concerns itself with those constant
qualities of matter which form the
basis of scientific classification
and is therefore limited to scientific
facts, but the reasoning involved in
the study of the languages concerns
the variable qualities of thought, and
feeling and action and is, therefore,
almost unlimited in the diversity
of its examples. The processes of judg-
ment when balancing probabilities

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in the translation of a complicated sentence, is precisely like the uncertain reasoning which obtains in ordinary affairs. The examples furnished by science are more rigid and complete - those of language infinitely more varied and numerous. The one produces the profundity and accuracy of an enthusiast - the other the facile sentences of an adept.

Glancing thus with reluctant brevity at the ancient languages as instruments of discipline let us ask next what position they

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can maintain as branches of
useful knowledge.

I need not enlarge on this
part of my subject before
such an audience as this

Of the interesting character
of the information attained
through the reading of the
ancient classics, there is not
the shadow of a doubt it is
good to enlarge our mental
vision
by studying humanity under
other aspects than the modern
one - It is good to learn
through heathen mythology

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for instance how sincerely a
cultivated people in the absence
of revelation worshipped the
images of a distempered fancy
It is good to follow through the
majestic numbers of the *Eneid*
the adventures of a wandering
hero But do not thousands
in the attainment of such
knowledge sacrifice that
which is better? Does it help
the father to bring up his
children in the nurture and
admonition of the Lord? Or will
it assist the citizen the better

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to make or to obey the laws?

Will it aid the surgeon with
his scalpel or the lawyer
with his brief? Is an acquaintance
with the enormities of love a
prerequisite to the preaching
of Jesus? The truth is no
knowledge is more remote in
its bearings on the purposes
of a grand and noble life

But the utility of an ac-
quaintance with these languages
themselves is far more man-
ifest. It is mainly, however, as

a preparation for pursuing other branches that Latin and Greek are useful Greek for example, is essential to the student of Theology to enable him to read the new Testament in the original tongue Latin furnishes largely the terminology of the medical and legal sciences and is therefore a valuable antecedent to the attainment of these. It also supplies, in liberal measure, the nomenclature of the physical sciences and

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tho' it should follow them in
an elementary course, it may
profitably precede them as more
advanced studies. Need I say
that a familiarity with the
Latin is the proper basis for a
complete mastery of the three
modern languages of which
it is the parent? Or that since
it contributes to the more def-
inite portion of our English
words it opens the only avenue
through which a critical and
exhaustive knowledge of the
vernacular can be reached.

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I cannot admit among the
the uses of Latin the claim that
many have made that it serves
as a medium by which ^{to} learn the
gram^matical structure of the
English For no two languages can
possibly be more at variance
in their grammar and con-
struction The Latin indicates
the relation of its words by in-
flexion and, consequently, its
possible varieties of arrangement
in the sentence, are very numerous
The English on the contrary

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having few inflections indicates
the relations of its elements by
position. Its grammar is, con-
sequently, simple, its syntax
meagre, and the possible
permutations in the arrange-
ment of its sentences ^(words?) ex-
ceedingly limited. The compensa-
tion, however, lies in its superior
force and directness. Latin con-
struction then tho' of great ad-
vantage to the student of general
grammar, gives but a faint
clue to the philosophy or
practice of the English idiom

The best method of learning to
work a machine is to study
carefully the adjustment of its
own levers and wheels Oh! that
some genius would arise to
construct a complete and regular
system on which the youth of
our schools could study exhaus-
tively the grammatical structure,
the rhetorical forces, the wealth
of synonyms, the classic poetry
and literature of our noble
vernacular. Such a system is
as seems to me ^{one of} the educational

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wants of the day

Hastening to close I give a rapid glance at Mathematics as an agency in the attainment of intellectual power. Mathematical science is evolved wholly from the intuitive ideas of number, space, and time. As these ideas accompany and limit all our intellectual operations, their scientific development is of the highest moment. As an exercise in reasoning the ^{higher} mathematics are valuable when combined with

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other studies but they become
harmful when too exclusive-
ly and absorbingly pursued
Starting with truths which
are intuitive and universal
~~They~~ ^{This science} gives no employment to the
judgement in generalization
or induction Proceeding by
syllogisms in which every
conclusion is an absolute
certainty it finds no coun-
terpart in our methods of
daily thinking But as it trains
the faculties to habits of contin-
uous and concentrated attention

It will justly maintain a sure³
foothold in every curriculum

As an indispensable aid
to business and as an instru-
ment of research and demon-
stration in the physical sci-
ences it stands on the en-
during foundation of use-
fulness to the world

Let me remind you in
a brief review that I have
endeavored to show that there
is less of difference than many
suppose between the great di-
visions of knowledge as means

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of discipline that no one of them
can answer the purpose of a
general gymnastic that the
training of the senses lies at
the basis of genuine culture
and that consequently the study
of the physical sciences stands
first in the order of time and
value that the study of
language as an instrument
of thought is indispensable

That the Ancient Classics are
of ^{great value} ~~high~~ but not now entitled
to the preponderance given

Then in the traditional system
that knowledge should be
sought for its uses, that dis-
cipline is an incidental re-
sult of unexpressible worth
but depending more on the
manner of studying than
on the matter studied and
that the culture gained from
an adequate preparation for
the duties of life will be of
the highest value because
most available

These considerations if
well founded combine

- to suggest the wisdom of such an adjustment of the courses of study, in our higher institutions, as that every student should have unlimited freedom while he investigates the laws of matter and mind with which life will bring him into inevitable contact, to pursue that line of studies which underlie his special ^{chosen} profession. In other words outside of the sciences that classify our material relations and those that systematize our social, civil, domestic, moral obligations the

Early
choice of a profession should
determine the choice of studies

Without presuming to
settle the particulars of
the numerous curricula
which such a standard
would require I will simply
add that its adoption would
give to science, literature, and
art, and genuine scholarship
a stronger impulse - and
the world would be filled
with more competent workers
in every department of success

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and Thrift. For depth must
be gained at the expense of sur-
face and the mastery of a
~~single~~ branch is better both for
the individual and for society
* than the widest range of su-
perficial knowledge

. Let no man say that
the principle we advocate
is must be erected on the
basis of a sordid utility
or a gross materiality. all
scientific knowledge is an
emanation from God and
leads the mind back to him

by an inevitable law

The study of human thought is the true antecedent to the contemplation of divine thought. Language and Logic, and especially Psychology underlie Theology.

The countless forms of matter are only the expression of God's ideas of goodness and beauty and truth and the sciences that classify them lead them lead the earnest student through the concrete

the abstract and the gen-
eral unavoidably up to the
universal the ideal the
spiritual and the infinite