

AN
ADDRESS

READ BEFORE THE

GOETHEAN SOCIETY

OF

MARSHALL COLLEGE,

AT THEIR ANNIVERSARY,

AUGUST 28th, 1843.

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1844.

GÆTHEAN HALL, Aug. 28th, 1843.

PROF. S. W. BUDD,

Esteemed Sir:—We tender to you our sincere thanks for the highly instructive and elegant Address which you did us the kindness to deliver this morning, and earnestly solicit the favor of a copy for publication.

Very respectfully, yours,

PERRY A. RICE,

HARRIS COX,

H. C. HERSPERGER,

Committee of the Gæthean Society.

AUGUST 28th, 1843.

Gentlemen,

Though I am diffident that the public will be much interested in my Address, I cannot refuse your request that it should be published, considering this performance as done entirely for your gratification.

With great respect and attachment, I am

Yours,

SAMUEL W. BUDD, jr.

MESSRS. P. A. RICE,

HARRIS COX,

H. C. HERSPERGER.

Committee of the Gæthean Society.

ADDRESS

TO THE GOETHEAN SOCIETY OF MARSHALL COLLEGE.

I am honored, gentlemen, in being permitted to address you on the occasion of your anniversary. The memory of Goethe is one which should be cherished by every lover of literature and science; and one which late associations have made especially dear to my own mind. To discuss his life and character, and the rich productions of his fertile genius might afford matter of instruction and entertainment for many occasions like the present, but diffidence forbids my entering upon a field which has been so ably occupied by those who have preceded me. I had indeed contemplated at one time offering to your consideration your favorite Goethe under a different view as the author of the *Farbenlehre*; a beautiful and original work on the doctrine of colours; but fearing a technical criticism or review might appear unentertaining, I have adopted another which, if it should prove equally dry, will I hope do no more than remind you how many dry subjects that have been discussed between us on other occasions.

It has been said that the opinions of mankind are as great in variety as they are in number. Each individual of the race claims the privilege of forming his own, yet every age of the world has been marked by some leading feature which distinguishes it from every other, and which has aptly enough been termed the spirit of that age. This indicates at least a tendency of individual opinion towards some particular point and whether it arises from an imitative propensity by which certain opinions are voluntarily made the fashion, or whether some unseen uniformity of circumstances influences men to direct their thoughts towards the same quarter; the fact is undeniable that the common opinion has its ebbs and flows on particular subjects—not

that it merely gives more attention to such subjects at one period than another, but that what is now highly valued may hereafter become entirely disregarded. However, therefore, man may plume himself upon his right to form his own opinions, here is a circumstance which indicates that opinions are not always held for their own sake, that much idle boasting prevails among men as to the value and independence of their own opinions, and that a great deal of what is said about the freedom of opinion is mere cant.

In our favored country there is no persecution for opinion's sake; liberty of thought is secured to every inhabitant; and the freedom of the press is untrammelled and complete. No man is responsible to another for the opinions which he forms and disseminates; and if it were not for the shame of being thought ignorant, or the consciousness of wrong which perversity and irreligion always entail, man might not feel responsible for a single thought. It is different with our actions; the law defines what is injury to another's person and property, and what is treason against the State, and fear of punishment is excited to keep us harmless. This is a most important distinction made between acts and opinions by enlightened lawgivers for sound reasons, but for the wise Being who penetrates into our inmost hearts, who knows every thought and opinion, and above all who can weigh motives and intentions, no such distinction is necessary. He punishes alike the libertine, and the free-thinker, the malefactor and the scoffer, and he may discriminate between the uninstructed and the wilfully ignorant. Can it be matter of wonder then that Parents and Teachers should be interested to form and guide the opinions of youth? If a man's acts are but the expression of his principles; if his opinions are the basis of his character; if indeed, they constitute the whole of his knowledge, how anxiously should the erroneous and mean be removed, and how carefully the virtuous and noble cherished!

It was not my intention, however, to pursue this subject in its moral aspect; your studies in moral philosophy, the precepts which you receive weekly from this desk and the early lessons of your parents, furnish you with abundant instructions how to

avoid any dangerous errors of a moral kind.—I will merely attempt at this time, to offer you a few unconnected and general views concerning the formation of opinions on speculative subjects, premising simply that to a great extent the same method of investigation belongs to all human science, the moral and the physical alike with the political and mathematical.

The simple ideas which are derived immediately from sensation are common to all men and furnish no ground of disagreement. We all see, hear, feel, taste and smell alike. We recognise the same quality in a multitude of objects which we fix in our minds and connect with a general term, there is no uncertainty in our own knowledge of it, and we are sure when we pronounce such a term that we awaken the same idea as our own in all who hear us. Here is perfect agreement and absolute certainty. Again, when we have ideas of all the separate qualities which belong to any external object; we are able to enumerate them and convey to others our own complex idea of that object and converse about it without fear of confusion. To comprehend a group of such objects we observe each one separately, we take account of their mutual relations and dependencies and our knowledge is complete. So when the mind is engaged about its own thoughts and contemplates things of which it finds no external images, and so when it takes cognizance of its own operations; every one who notices them finds the same elements and goes through the same reasoning process—the same process of analyzation and generalization. If the knowledge attainable from this source is realized by but few, it is not the less certain and satisfactory. In all cases our notions of whatever we thoroughly comprehend we call true, we feel conscious of no difference between the thing under consideration and our idea of it, and this is the real ground of certainty. Why is it then that men differ? If the elements of all men's knowledge are the same, why should reason conduct them to so different conclusions? Interest, passion and prejudice, are a fertile source of difference in a multitude of questions even where truth seems to be the sole object of pursuit: but how much does it not arise from the mere vanity of man, who, aiming at knowledge beyond his grasp, assumes as

principles what his limited powers of observation may not ascertain, or which the state of science does not warrant, and which are as unsubstantial grounds for any solid conclusions as they are unsafe and uncertain in themselves. Such difference should be regarded as the plainest expression of ignorance or error; for truth is everywhere the same; and one truth never contradicts or falsifies another. The history of science abounds in instances of error of the kind last alluded to and it may be profitable to us to glance at one or two with a view to some general inference or remark. If those I mention are already familiar to most of my hearers, they will nevertheless perhaps regard them with some interest in this connection.

The Greek Philosophy was little else than a succession of the most contradictory speculations most of them superficial and groundless, and deriving their authority from the great eloquence and personal reputation of the Founders. Not to speak of the Polytheism and Atheism of some and of the gross views of the Deity maintained by others, their doctrines of virtue and morality were various enough to make it well doubtful whether man by reason alone can find any solid criterion of right and wrong. A few indeed inculcated a high and rational morality, but others contended that there is no essential difference between vice and virtue, excepting so far as it is agreed among men that certain actions ought to be considered right and others wrong; and there were not wanting philosophers who asserted that God is utterly indifferent to the actions of men and that each individual is permitted to seek his happiness from any sources that afford him pleasure. Their speculations about the nature of matter, the creation and the laws of the universe embrace every variety and form of doctrine. If it is not to be wondered that among so many conflicting opinions there should be found some to correspond with revelation, or the better ascertained truths of modern science, neither is it wonderful that there is scarce one of the absurdities of modern times that has not been advocated by some one or other of the Greek Philosophers. Their rare genius and their eloquence, the beauty of their language, and the skillfulness of their sophistry were calculated to win equally the applause of the

multitude and the favor of the learned, and their errors are precisely those to which youth of quick talents and ardent temperament are always liable. It is tedious to a mind which looks at great results to consider all the little precautions that are necessary to make its progress safe and sure in a new field of inquiry; to advance slowly; to examine and compare all the objects that present themselves; to verify each successive step; to turn often and look back upon its pathway; and when its end is gained, to seek distrustfully all around for every possible source of error before it admits the feeling of security. The ardent mind disdains such impediments, and leaps at once to its brilliant and attractive goal, confident of its own powers and heedless of the consequences of error. In literature and art, it is such a spirit that is crowned with immortality, one single happy effort of genius may win an eminence upon which succeeding ages will gaze in wonder and delight, and to which a crowd of puny imitators may aspire in vain. But it is not so in science. It is boundless and indefinitely progressive; what one mind works out is but a starting point for the next, and it is vain in man to arrogate to himself the fruits of ages of labor, and grasp at theories which involve the principle of all future knowledge. It is not enough that a theory be true, it must be held upon substantial grounds, to be valuable it must flow from apprehended truths of which it is but the more comprehensive expression; otherwise it is barren and unmeaning and should be regarded as a mere stroke of good luck or a happy guess of its author. Homer, Sophocles, Phidias and a host of others have left splendid monuments of the genius of the Greeks, whilst Plato and Aristotle are almost the only Philosophers whose writings contain a tincture of true science and the beauty of whose errors makes them still acceptable to the enthusiastic and speculative of our own times. Such a result affords a discouraging picture of the weakness and caprice of the human understanding and warns us against the illusions of vain speculation.

Ingrafted as these errors were upon all the knowledge of the ancients, it does not seem strange that they should so long have had possession of the schools whilst the grosser pretensions of

Astrology were permitted to continue almost unchallenged. This superstition is as ancient as Astronomy itself, and is as pardonable in the early ages in which it arose as any of the astronomical theories with which it was associated. Believing that the earth was immoveable and of infinite extent, and that all the movements of the celestial bodies had somehow reference to the vast centre about which they turned, the ancients imagined a species of connexion which was grateful to man's vain glory, and no doubt easily gained universal acceptance. They fancied that each planet exercised a peculiar influence upon the fortunes of men, which was modified or counteracted by the action of the other planets, in a manner depending on their relative positions or configurations. This influence, it was believed the wise men after a long period of observations had succeeded in interpreting, and as they were able to foretell the positions of the planets with sufficient accuracy for a number of years, they also claimed the ability to predict future events. Whether the Astrologer was the dupe of his own pretensions or not, the ignorance of the multitude in those early ages made them appear probable and natural, connected, as they were, with predictions of the celestial phenomena which seemed as mysterious and inscrutable as the workings of destiny itself. Astrology maintained its hold upon the minds of men until the proof of the Copernican theory of the movement of the earth and the discovery of the law of gravitation, by the clearness with which they resolved the heavenly mysteries banished it forever from the domain of science. Although wise and good men had long looked upon Astrology and the otherso called occult sciences with fear and abhorrence, and they were condemned by the laws as the devices of Satan, still the essential error remained even in the minds of those who denounced them, and this was the admitted possibility of man's attaining to supernatural power and knowledge by his own agency. True it is, there are hidden things in nature, laws undiscovered and mysterious powers at work whose effects only we see; but these it is the privilege of philosophy to investigate—to follow up and bring to light the truth and dispel mystery and error wheresoever they lurk. Such has been the actual ten-

dency of science since the great Lord Bacon first gave to the world the method which immortalizes his name.

This philosophy assumes that what we call experience or observation and experiment form the true basis of science as we have seen they do of our individual knowledge. Nothing appears a more obvious dictate of common sense than "*that we should know before we judge ;*" and yet this homely principle carried out may be said to be the distinguishing feature between the old and new philosophy. In the former the theories ran before the facts or before experience ; whilst in the latter they are the generalization of those facts.

It is no objection to the Baconian philosophy that an important part of our knowledge is independent of external experience, and is the offspring of pure thinking alone. Our thoughts are realities which we experience as plainly and may describe as distinctly as any external phenomena about which the mind is conversant ; indeed it is chiefly in abstract science that we find realized the uniformity and certainty which we have stated so eminently characterise truth.

It is not maintained that reasoning was anciently a different process from what it is held to be now, but merely that less caution was exercised by the ancients in ascertaining their premises about which the inductive method is principally employed. What a multitude of vexed questions have been put forever to rest by the single labors of Locke in the province of mind and Newton in physics ! Not to speak of what has been done by their scarcely less illustrious successors, the fruits of the labors of these two geniuses would be enough to manifest the soundness of the inductive philosophy. We repeat it, ever since the time of Lord Bacon the progress of science—by which we understand the discovery and demonstration of positive truth—gives abundant promise of what we are still to expect from the new philosophy in the way of reconciling differences and exploding fallacies. In the mean time every one should contribute his part actively or passively towards the bringing about of so wished for an object, and I hope I shall be pardoned, if I venture to distribute a small share of this good work among those who hear me to-day.

It should be the aim of all to acquire every kind of useful knowledge. The more we know, the more easily we apprehend what we attempt to learn; for there is no branch of science which does not derive essential assistance from every other. Whoever confines his studies and observations to narrow limits cannot at his pleasure suddenly enlarge his views to accommodate the vastness of a new subject, however closely related to them. If it were only as a preparation for admitting new truths we should, therefore, be well informed upon correlative subjects. How much difficulty is often thrown in the way of a new invention, or a new principle, because the age is not prepared to understand it, or not able to appreciate its value.

But if we would aspire to advance science, it is of vastly more importance to us to master all that has been done before us. It is unsatisfactory if not mortifying to undergo all the labor of discovery in order to arrive at facts and principles already well known to others. We should endeavor to avoid such repetitions. More than once I have seen young men puzzled to discover some of the plainest truths, which they had had pointed out to them, in their college course, but which fell fruitless upon their inattentive minds. Much useless labor might be saved that is lost in vain pursuits, and much perplexity and disappointment spared if it were first inquired whether some unlucky predecessor had not already suffered shipwreck in the same attempt.

Again, we should not be unwilling to admit the correctness of results which we cannot fully understand. What are almost self-evident truths to some minds are utterly unintelligible to others, not on account of a natural inferiority, but for want of the requisite knowledge to comprehend them. If our pursuits or inclinations do not permit us to keep pace with the progress of science, we should at least, not throw impediments in the way of those who are laboring for its advancement. Although a truth will not be the less true because we refuse our assent to it, yet it always casts gloom over the sensitive mind of genius to find no sympathy and respect for its great achievements. Before we pronounce upon the value or truth of a new principle, let us be sure that we understand its full im-

port and all its bearings upon other parts of science, or otherwise let us have the modesty to allow it to pass unquestioned.

Lest it be inferred that we incline to adopt the conclusions of others upon trust, instead of investigating for ourselves, we would anxiously disclaim it. It is impossible for every one to ascertain from his own individual resources and experience all the knowledge he may desire to possess; but there are certain elementary processes and truths which may be employed with great facility and expedition for this purpose and which greatly simplify the business of investigation. The mathematics, the general laws of physics, the leading principles of mental and moral science, in short the usual elementary studies of our colleges are calculated and intended to effect that very object to a great extent. It is on this account indeed that general truths or facts are so much more valuable than particular ones, they are the tests and instruments to serve in subsequent investigations. With all the aids of this kind, it is not to be expected that one mind shall go through the labor of investigating every proposition it adopts. The more the mind is exercised in this way the better, but it is natural to repose confidence in the opinions and conclusions of others on subjects to which we know they have directed their chief attention. So natural is it indeed, that it is not to be denied that the danger lies in too great credulity, rather than too great distrust. There are experiments and observations which have run the whole circle of the sciences, and which no one perhaps has ever made, but the philosopher who first announced them. They are laid up among the annals of science and rest upon the same ground with other historical facts, no one ever thinking to call them into question. Some are rare phenomena, some have been made with instruments not accessible to every observer, and some are only to be met with in distant countries, but they are at the disposal of every student of science.

When great authorities happen to favor both sides of a proposition or when the nature of the subject does not admit of absolute proof, it will be indispensable, if we wish to form an independent judgment, to investigate its truth for ourselves. And here there will be necessary all that care and caution in

forming our opinion which we have insisted upon so much, as giving it value. Perhaps the rarest preparation will be to divest ourselves of all predilection for either side of such a question ; for strange as it may seem, we are in danger of being misled by feeling and passion even on scientific subjects and especially when we have so far committed ourselves as to have expressed a premature judgment. On every disputed point our conclusions ought to be maintained with that diffidence which is due to the real difficulty of the subject, for we ought to presume that if the proposition were really not questionable, it would not be questioned. Further investigation and discoveries of our own may indeed set the question in so new a light that our opinion may be considered as fully established. We have then made a contribution to positive science which will be more or less estimated in proportion to the importance of the subjects upon which it bears.

It is an interesting question and by no means one of mere curiosity, how far the will is concerned in forming opinions upon evidence, and especially what amount of evidence ought to be considered sufficient to determine the judgment when it is directed towards speculative subjects. Difference of opinion, as we have remarked before, may indicate an actual want of sufficient evidence to induce certainty, or an unwillingness or inability in some minds to go through the evidence or from the subject being beyond the region of our experience, and approachable only by analogy, all of which may render our conclusions uncertain or what we call only probable. The calculation of probabilities, which a distinguished geometer has designated as "good sense reduced to calculation" has reference to such considerations and throws a great deal of light upon a variety of questions in Philosophy.

Although the mind should be well trained by every kind of exercise, in order to have all its faculties developed, it will be impossible for any one who does not direct his studies for the time towards some definite point to make any useful progress. It is very common for young men to neglect the elementary studies of school or college to devote themselves to what they call general reading. A volume of history, a literary essay or

a political tract furnish, to be sure, pleasant reading enough, but such studies are rarely carried to any substantial result; a collection of facts made without system and for no object but the very indefinite one of the improvement of the mind is all that is gained. Let such a student make his own final examination at the close of his college course and he will find, that in studying history he has never had one of the legitimate ends of the science in view, if indeed he knows at all what they are, he has derived no general or valuable principle in politics, and his opinions in belles lettres are a catalogue of likes and dislikes towards particular authors. This is by no means a necessary result, but it is the too common mistake of minds which cannot relish elementary studies, and which show their own defects in the very distate. So it is in acquiring a profession, and very few young men can be said to have commenced their studies until they are found working out a new point in one of their own cases, and are compelled to frame for the first time an original opinion. And what zeal does it not impart to the mind of genius to catch the glimpse of a new principle and as it proceeds to find its first guess strengthen into an opinion. To satisfy itself, to attain the evidence necessary to its general acceptance may be the work of a life time, but how happily and steadily is it pursued to the triumphant Eureka!

A great deal more might have been said upon each of these points and many more means designated by which we all might aid in the general advancement of science. It has not been my object to speak of the beauty of truth, the useful applications of science or the pleasures enjoyed by a mind addicted to letters. These we all feel and acknowledge; but merely to suggest some thoughts which might be overlooked by a young beginner in science as to the formation and estimation of opinions. What I have said is of too general, perhaps I should say, too vague a nature completely to fix your minds on any of the topics alluded to, but if I should lead a single one of my young hearers to conclude with any practical determination, that

A little learning is a dangerous thing,

I shall have gained a great object. It will be observed that

the errors I have pointed at are those of science and of the general opinion so called ; and in speaking to a society of literary young gentleman, I have taken it for granted that all my hearers love the truth for its own sake.

There is only one more thought to which I would direct your attention, that you should guard yourselves against too great a fearfulness in receiving scientific facts which appear to contradict certain passages of the Scriptures of truth. We should remember that the Bible is not a revelation of science, but a revelation of practical religion and morals. Whoever has studied the systems which have sprung from the efforts of men to find a principle of morality from reason and nature, must have been struck with their signal failure. No principle which does not refer itself eventually to the will of God has been able to stand the objections of reason itself and the vain attempts to discover his will independently of revelation result in the conviction as a scientific conclusion, that without a revelation we can have no sure criterion of right and wrong.—There could be no greater triumph against the foes of Christianity than this ! But on the other hand, those who appeal to the Bible for support in their scientific speculations may find much to embarrass and little to aid them. It is doubtful, to say the least, whether the sacred historians contemplated even any of the theological questions which are forever in agitation, and certainly nothing seems more evident than that the ordinary phenomena of nature were spoken of according to the popular notions of the time. It was a spectacle disgraceful to the Church when the great Galileo at the venerable age of seventy, was compelled to swear on his knees that he detested and recanted the heresy of the movement of the earth, a truth which he had clearly demonstrated and which no one thinks of now as contradictory to revelation. The hypothesis of Laplace has been too severely viewed by some friends of the Bible, and some of the facts which geologists have brought to light and which cannot be reconciled with the letter of the inspired history, threw the study of geology into temporary discredit. But let us hope that this day is past, and trusting that the God of revelation and the God of nature are one, let us look without

dismay upon the labors of men whose discoveries shall all be made to redound to his glory, and the discomfiture of the enemies of truth.