The value and importance of Mechanics'Institutions : an address, delivered on Monday evening, the 29th of May, 1836, before the managers, teachers, members, and friends of the Sheffield Mechanics' Institution / by Charles F. Favell.

THE VALUE AND IMPORTANCE OF MECHANICS' INSTITUTIONS.

AN ADDRESS,

DELIVERED

ON MONDAY EVENING, THE 29TH OF MAY, 1836,

BEFORE THE

MANAGERS, TEACHERS, MEMBERS, AND FRIENDS

OF THE

Sheffield Mechanics' Institution.

BY CHARLES F. FAVELL, M. D.,

PRESIDENT OF THE MECHANICS' INSTITUTION, &C.

PUBLISHED AT THE REQUEST OF THE COMMITTEE OF MANAGEMENT.

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ADVERTISEMENT.

The following Address is published solely in deference to the wishes of those at whose request it was originally prepared.

The remarks were put very hastily together, in the intervals which the writer could snatch from more important engagements, during the two or three days immediately preceding the time of their delivery.

Howard-Street, June 8th.

ADDRESS, &c.

In preparing the present Address for the Members and Friends of the Mechanics' Institute, it would be affectation in me to assert that I have experienced no difficulty. The fact is, I have found the difficulties to be much greater than I originally anticipated. When first I was asked to deliver an Address, I very readily assented;—I thought at the time that the way was clear before me,—in fact, looking through a lengthened vista, the ruggedness of the path was not perceived, or the obstacles which at this moment impede my progress, seemed but as pigmy points, which would easily be surmounted. But oh, how deceptive is a distant view to an unpractised eye! If I could as clearly have perceived, and as duly appreciated the difficulties of the undertaking, a few weeks ago, as I do at present, I should either have altogether shrunk from the task, or I should have allowed myself more time for its accomplishment.

I have felt considerable difficulty in the choice of topics. I was told that the address was to be altogether *admonitory;* but as I naturally shrink from fault-finding, you must not be surprised if my admonitions are exceedingly brief. I shall endeavour to compress what I have got to say into three general divisions;—1st, *congratulatory;* 2nd, *admonitory;* 3rd, *encouraging*.

1st, I would congratulate every friend to the extension of knowledge, on the mere fact of the existence of this Institution, and on the degree of prosperity which it at present enjoys. I never participated in the sentiments of those who feared the effects which must ensue from diffusing information amongst the working classes. I never could see the evils to which they have pointed; and, therefore, I have never swerved from the course I originally marked out, of cheerfully co-operating with others for the furtherance of institutions like this, and contributing, as far as I am able, to the general fund of information, which is the common property—the stock-in-trade of such establishments. Yes, my Friends, in this day of joint-stock mania, I do not see why we should not have a joint-stock Knowledge Company; whence, if we draw not intoxicating drinks, we may draw a stream which will fertilize and fructify the mind,—where, if we travel not by Railroad speed, we shall at length, by perhaps a winding, but a pleasant road, arrive at the goal we have in view, or where, the directors

of our Bank being Zeal, Virtue, and Perseverance, we need fear no rivalry, and dread no stoppage.

I know many intelligent and excellent men who look not with a friendly eye on this and kindred institutions; but it is not now the time for me to dwell on their prejudices. I can only express my hope, that the conduct of those who come here for information, will be such as will afford direct and practical evidence, that those prejudices are unfounded—those fears unnecessary.

Mechanics' Institutions are evidently intended for the labouring classes; and of these, both for youths and for adults. The advantages which they offer to each are marked, but different. Here the artisan may retire after his daily toil and enjoy those intellectual pleasures for which his mind is thirsting; here he may have his attention directed to various interesting and edifying subjects, which will tend to lighten his labours during the coming day, and to cheer him in his quiet but humble home. And oh, we should never lose sight of the important fact, that all men are searching after happiness—all men having a capacity for enjoyment, are eagerly in the pursuit of it. One man seeks his happiness in low, grovelling, sensual, debasing, indulgences; but, alas, how greatly is he duped; the excitement of which he partakes is short lived; and disappointment and vexation of spirit are the consequences of his revelry. Depend upon it, the standard of happiness cannot be placed too high, for you will invariably find that the intensity and permanence of enjoyment will bear a direct proportion to the height of the standard which you fix.

Do we, at the present day, complain of the immense prevalence of intemperance? Do we see this grievous vice coming in upon our land like a mighty flood, threatening to overwhelm the very foundations of society? What is the barrier which will be most likely to stay its waves? Why, my Friends, I hesitate not to say, that you will in vain attempt to stem the torrent by means of temperance societies and similar institutions, unless, at the same time, you raise the moral and intellectual character of the people. Until you can give them higher pleasures—until you can impart to them a relish for purer enjoyments, the success of such establishments as I have now alluded to, must necessarily be very partial. But if you can interest a person in the proceedings of Mechanics' Institutions—if you can prevail on him to become a member, you will soon find that he will lose his relish for the pot-house—the society with which he was wont to associate there, will cease to delight him; his pleasures will become of a more refined, more elevated, more enduring character.

Of one thing I am certain, namely, that many a man has been driven to the public-house from the want of some more desirable place of enjoyment. After the fatigues of the day, he has wanted society, (for man is essentially a social being,) and he has gone to the public-house, not for the purpose of drinking, but to meet his fellow men and listen to their conversation. This has been the case with many individuals, and thus numbers have been first led to contract those habits which have subsequently ended in the ruin of themselves and their families. But, suppose the poor man could have gone with others to hear a lecture, on an interesting and instructive subject, and at a very small ex-

pense, it is very probable he would have preferred the latter to the former method of spending his leisure hours.

I am further satisfied, that a great many persons at present acquire the habit of frequenting public-houses, for the mere purpose of hearing the political news of the day; and I heartily hope to see the time when a flourishing news-room will be connected with every Mechanics' Institute in the kingdom. Yes, and I would go further still, and provide not only for the intellectual culture, and for what I may call the literary recreation of the working classes, but also for their out-door amusements. It is a lamentable fact, that neither the rising nor the risen generation can engage in the various athletic games which are so closely connected with their muscular development and bodily health and vigour, without going into grounds connected with public-houses. But if large plots were selected in convenient localities, in every large town, where the labouring classes might go and amuse themselves, according to their several inclinations, great physical good would immediately, and great moral good would as surely, but perhaps more remotely result from the arrangement.

The parks in London have been called the lungs of the metropolis; and if we reflect on the full force of the meaning implied in the expression, we shall at once see the desirableness of having some better lungs in the provinces; or if we reflect on the intimate connexion which subsists in the animal system between the lungs and the whole of the functions of the body, and believe that a similarly close connexion subsists between the body politic and its organs of respiration, we shall immediately perceive the immense importance of an arrangement similar to that at which I have hinted. But it may be said, that the population here is not so dense as it is in London, and moreover, that by my own admission, there are more places for the out-door amusement of the people. It should be recollected, however, that large numbers of our population are crowded together all day in close, confined and necessarily unhealthy rooms, pursuing their usual avocations; and further, that the *moral atmosphere* of the places of amusement which we do possess, is fearfully contaminated by the public-houses which are invariably connected with them. If the health and vigour of the body are to be maintained, it is not only necessary that the organs of respiration should be well developed, but that the atmosphere which is breathed should be free from impurities. On this subject, however, I shall not at present enlarge.

I will only further observe, that as a means of improving the taste and refining the minds of the labouring classes, I should anticipate much good from establishing exhibitions of works of art, and opening Botanical Gardens. No person can go and look on paintings and sculpture without being to some extent benefitted by the exhibition.—No one can reflect on the beauties and wonders of the vegetable creation, without his mind being elevated and purified by the contemplation.

But I must pass on to glance at the advantages which youths—apprentices—derive from Mechanics' Institutions. I need not at all enlarge upon the benefits which must accrue to them from being taught reading, writing, and arithmetic. They often obtain some elementary

knowledge, in the two former of these acquirements, in very early youth; but, partly in consequence of being removed from school whilst they are still quite children, and partly from the incompetence of the teachers in the great majority of infantine establishments, it is found that there is great need of further instruction in even the most elementary branches of education. Here, then, the Institute commences its duties;—it takes these poor, neglected little ones, and, by means of competent teachers, affords to them that instruction of which they so greatly stand in need. All those who come for the kind of instruction of which I am now speaking, are not so very young as might be inferred from what I have said. It will be found that, in our elementary classes, there are youths of every age, from twelve to twenty; some of whom have had previous instruction, and others have not. I am informed that the conduct of these young persons is, on the whole, very creditable: of course, there are occasional instances of misbehaviour; but this we shall be prepared to expect, when we consider that there are 224 youths, who assemble in the classes, and that they come from all the different manufactories in the town. We know how frequently it happens, that exceedingly bad examples are set to young boys by their seniors in the workshop; and we know, moreover, that if we were to collect together 200 boys from any class of society, there would be a few amongst them whose wayward dispositions would lead them into practices of which we could not approve. On one evening in the week, several of the youths receive instruction in drawing; and in this department much good is effected. Several of the specimens by pupils, I could introduce to your notice, but the majority of my hearers are placed at too great a distance to appreciate their merits; they would bear a minute inspection by daylight—to introduce them to-night would not be to do them justice. I need not stop to point out to you that drawing is something more than a mere accomplishment. In many branches of the Sheffield trade it cannot be dispensed with; hence, by the establishment of our Drawing Class, we are not only affording to the pupils an innocent and interesting amusement, but a direct and decided practical benefit.

In addition to the classes of which I have already spoken, there are others which deserve a passing notice. There are two Grammar Classes, in which young men are taught to speak and write correctly; and I am sure those who pay any attention to the conversation of the immense majority of persons in humble life, will at once perceive the advantage of giving them instruction in this particular. Few, very few comparatively, know anything about their mother tongue beyond the simple meaning of the terms by which they express their wants, wishes, or feelings, to others; and the great majority of sentiments expressed, if strictly analyzed, would be found to mean something which the speaker never intended. Very often it would happen that they meant just the opposite to what they were intended to convey. If I were in the habit of noting down the extraordinary speeches which are almost daily made to me by poor people, I could furnish you with an immense number of amusing examples, in confirmation of what I have said. I will only remark, however, that they are in the constant habit of speaking in the comparative degree, when they ought not;—

for instance, if you ask a person who has been ill for any length of time, if he is better, he will immediately answer,— "I am not better;" then, if you proceed to inquire into individual symptoms, and after a complete investigation, you say to him, "Well, but you are better than you were," he will reply, "Yes, I'm better nor I was." Now, not to remark on the beautiful specimen of grammar contained in the reply, I will only observe, that the man meant to say that, although he is better, he is not well. He meant by the term "better," quite well; and hence he would never acknowledge himself to be "better," however much relieved he might be, so long as a single symptom of his malady remained. Again, you will say to a person in bad health, "How do you do to-day?" and he will answer, "I'm not no better, thank you." Now here the person means to say that he *is not* better; whereas, since two negatives are equal to an affirmative, he does virtually declare that he *is* better. The written communications of the working classes are as bad as their oral ones, or, sometimes, they are even worse. Occasionally, it is a complete puzzle to find out their meaning. Now, surely, it is desirable that this state of things should be improved, and that persons of every class, in their ordinary communications with each other, should make use of plain, simple, intelligible language. This is not the time for me to remark upon the low, disgusting, obscene, blasphemous language, which almost constantly assails our ears as we perambulate the streets of our town; but, my Friends, I do think that Mechanics' Institutions are calculated to produce an amazing improvement in this respect; and if I were invested with dictatorship, I would immediately dismiss any youth from this establishment who was detected making use of such expressions. Oh! the horrible oaths and imprecations which are made use of by parents to children,—by little children themselves, who can scarcely pronounce a word in our tongue intelligibly, as well as by men, (aye, and by women too,) in their intercourse with each other, are almost sufficient to freeze the very blood in its vessels!—they often strike through my heart like a sudden electric shock!

But with respect to teaching the working classes grammar, it has been objected, that you will, by such means, enable domestic servants to correct their masters or their mistresses, who, from a previously neglected education, do not always speak with strict grammatical propriety. Now I am not one of those who would limit the attainments of the servant by those of the master. I would let each learn as much as he could; but I would at once repress the impertinence of a servant, who should presume to find fault with the bad grammar of his master's orders. The advantages they have derived from this or similar institutions should make men thankful and humble—at any rate, they should not make them impertinent. In concluding my remarks on the Grammar and Composition classes, I will read to you a specimen which has been sent to me. It is the production of a pupil attending these classes, and who, I believe, has derived all his knowledge on these subjects, from this Institution. I am not acquainted with the writer's name.

"In an Essay which was read to the Discussion Class, on the question, 'Is genius innate or acquired,' it was stated that circumstances alone determine what a man shall be in life.

"In the first place, I believe that genius does not consist in any acquirement, but that it gives the power to acquire with facility such knowledge as is requisite for its development. When possessed in a high degree, it is distinguished by its power to discover, invent, or produce, something of which mankind was previously ignorant, and which something bears so strongly the impress of truth, beauty, or utility, as to obtain for it the admiration of the world.

"Secondly.—Mankind is composed of a variety of constitutions and dispositions, arising from a difference of organic structure and mental development; and as genius is implanted in this or that temperament, so does it manifest itself. For instance, if it be combined with a sanguine temperament, it seldom undertakes any great work, but displays itself chiefly in wit, humour, and sprightly conversation.—If it be implanted in a robust and hardy constitution, which is capable of enduring great hardships and privations, the individual may become a great traveller, a great warrior, a pirate, the captain of brigands, or some such bold and daring character; which of these, will depend upon the nature of the circumstance that first awakens its latent power. If it be in conjunction with 'a sound mind in a sound body,' and an uniformity of disposition, it fits the individual for undertaking those abstruse studies which require clearness of thought, coolness of judgment, and close investigation. Such a one may become a mathematician, a mechanician, an astronomer, a chemist, or a moral philosopher,—circumstances will decide which of them.—Lastly, if it be implanted in a bodily conformation of such exquisite sensibility that the impressions made by external objects are peculiarly strong and vivid, in consequence of the refined medium through which they are received, it renders the individual capable, by the intensity of his perceptive powers, of collecting and combining a large number of ideas; and also of distinguishing and appreciating all that is sublime, beautiful, elegant, perfect, or poetical in nature and art, and thereby fits him to become a poet, a painter, or a sculptor.

"Thirdly and lastly.—I have endeavoured to shew that circumstances alone are not the cause of a man's becoming a great character. They give place to two other causes; namely, genius as a primary, and organization as a secondary cause. And that the part which circumstances perform is only to awaken the dormant power of genius, which then prompts the possessor to some pursuit for which he is peculiarly adapted by his organization."

Pupils also receive instruction in Geography, which is not only interesting, but exceedingly valuable; in Algebra and in Stenography. Some persons may think that very little good can result from teaching young men short-hand; but we should recollect that by such an acquirement, they may fit themselves for newspaper reporters,—a very valuable class of men, to whom we are indebted for nearly all the interesting matter which we read in the newspapers; or, sometimes, by the exercise of their power of short-hand writing, they can amuse and edify their own family circle. A pleasing instance of this very recently presented itself to my notice. Then, again, there is a Natural Philosophy Class,—a Discussion Class, where a number of young men meet, once a fortnight, to discuss certain subjects which have previously been announced, but from which all questions of party politics and polemics are carefully excluded,—a very small French Class, and a still smaller Latin Class.

There are some, I doubt not, who think that, by the last two classes, we are carrying the Institution too far, doing more than is either necessary or desirable. It should be recollected, however, that we do not compel any to attend these classes; it is quite optional with them. But if there are those amongst the members of the Institution who desire to become acquainted with the language of ancient Rome, or with that of the greater part of modern Europe, and are willing to bestow

the necessary labour in their acquirement, I can see no harm which will be likely to result to them from being able to read the sweet poetry of Virgil, or the eloquent sermons of Massillon, in the original. I know, however, that the acquisition of languages, so as to become completely master of them, and be able to appreciate their beauties, must take up so much time, and be attended with so much labour, that I should not recommend their study to those who come to Mechanics' Institutions for instruction. I think you may devote your attention to many other subjects, which will be of more practical advantage to you.

Now it should be distinctly borne in mind, that all this instruction is given to young men after they have finished their ordinary occupations. It does not at all interfere with their daily labour. This is an important fact to be remembered. We find employment for them in their leisure hours,—those hours in which they are more peculiarly exposed to danger. If young men go astray, and get into dangers and difficulties, it is not at the workshop,—it is not whilst they have plenty of employment to occupy their bodies or their minds; but it is when their labours are over, when their work is finished, and when they assemble together for the purpose of amusement, during their leisure. It is at this moment that the Institution offers to throw her shield over them, by which the poisoned arrows which are flying all around will be repelled. It is at this moment that the Institution opens wide her doors to them, and invites them to take refuge in her safe retreat. It is at this moment that she offers to them her peaceful, mental fruits, when they are about to feed on the husks of dissipation and disquiet. And oh, my Friends, there surely cannot be a parent here who would not gladly pay one shilling and sixpence, as entrance money, and three shillings half-yearly, subsequently, to preserve his child at the most perilous period of his existence, and to secure for him the benefits to which I have before adverted. Believe me, leisure is the bane of children; keep them fully occupied in useful pursuits, and you will find that the best preventive of improper practices.

But there are other advantages held out by the Mechanics' Institution, and to these I must briefly allude. Not only do we afford instruction on the topics to which I have now adverted, but young men are also admitted, without further charge, to the lectures which are from time to time delivered before the members. It is not to be expected that they can all derive immediate benefit from the lectures which are given, but they are, at least, kept out of mischief, and many of them, doubtless, derive either amusement or instruction. This may be safely inferred from the subjects of the lectures. I will recount those which were brought before the Society last year. One on History, two on Matter, one on Dissection, two on Astronomy, four on Botany, three on Education, two on Geography, one on the Philosophy of the Human Mind, one on the Moral Advantages of Mechanics' Institutions, two on Oxygen and Hydrogen, one on Electricity, eight on Steam and the Steam Engine, two on Elocution, and one on the History of Poland. Now, many of these must, necessarily, interest persons of every age, and of very different attainments. One party would be chiefly pleased with the manner and style of the lecturer, another with the matter, and a third with the experimental illustrations. But still, I am ready

to admit, that although the lectures are both interesting and instructive, they are not nearly so instructive as they ought to be. By this observation, I think I shall not be accused of intending any personal disrespect to those gentlemen who give us their aid in this important department of the Institution; neither shall I be charged with an intention of detracting, in the very slightest degree, from the value of the lectures with which they favour us. No; my own individual reputation is too closely bound up with the matter to allow of me thus committing myself. What I mean is, that the subjects are too miscellaneous to leave that amount of benefit which would be likely to result from a more extended series of lectures, on a limited number of subjects.—When the attention is directed to such a variety of topics as were brought before you last year, for instance, the mind becomes confused; and the subjects, for the most part, must be treated in such a very general and popular style, that only very few persons can be really benefitted by their attendance. In other words, I fear that the lectures are rather calculated to afford amusement than instruction; and hence, that many persons come with an expectation of being amused, instead of with the hope of being edified. If brilliant experiments, or oratorical display, are to be introduced in the course of a lecture, the room is crowded; but if there are to be none of these extrinsic ornaments,—if the lecturer, despising these artificial aids, should stand before you, relying solely on the importance and dignity of the subject of his address, he will very probably speak to nearly empty benches.

Mechanics' Institutions are, essentially, schools for the instruction of the labouring classes, not only, as I have before observed, for the juvenile, but also for the adult population. Now, looking upon them in this important point of view, they present an aspect of very great interest. What, then, ought to be the kind or course of subjects brought before the members? I will enumerate a few which I think ought to occupy a very prominent place in our proceedings. There are many others which might be incidentally introduced with advantage.

First, it seems very proper to direct the attention of the members to the *nature and constitution of the world which we inhabit*. By the good providence of God, we are placed in a world which, on every hand, bears marks of the wisdom, and beneficence, and power, of its great Creator! But how very few reflect upon, how very few can appreciate, the beauties and the wonders of creation! I think I may say that we can perceive them just in proportion as the eyes of our understandings are penetrated by the light of science. Yes, science will at least unfold to us the wonders of creation, if it will not (and, alone, it will not) lead us to praise Him by whom all things were created.

An enquiry into the nature and constitution of the world, will lead us to notice—1st, *the animal kingdom*. I cannot, however, enlarge on the several divisions of my subject, which, like a mighty ocean, stretches itself before me. Let me, however, in illustration of my remark, make one or two very brief observations. Who, but a person to some extent acquainted with the doctrines of the conduction of heat, could perceive the beauty of the use of feathers as the clothing of birds?—or who, but one so acquainted with conduction could see why the

quadrupeds of different climates should have different coverings—coverings precisely adapted to the climate which they inhabit? How often do we see a fish rise to the surface of a river, and then sink down again into its watery world without reflecting on—without knowing, in fact, the mechanism by which it is enabled to do this; but when we are made acquainted with that mechanism, how admirable is the contrivance! Again, how often have we seen a fly walk up the glass in our window or on the ceiling of our rooms, without an idea passing in our minds that it is indebted for this power to a singularly beautiful bodily conformation! How little do we suspect that it is exemplifying one of the most striking and important laws in Pneumatics! How few persons know that a horse and a bird have each a third eye-lid, by means of which they lubricate the eye and wipe off foreign bodies! Who would dream of bees forming their cells on the strictest mathematical principles! But all these things are true, and surely they unfold to us wonders and wisdom which we never suspected were thus displayed.

We may admire the beautiful plumage of the bird, and we may delight to hear him warble forth his soft melodious notes; but surely our admiration is increased, if we reflect on the fact of his covering being the best which could possibly be selected, in reference to warmth and levity; that by its lightness, the bird is enabled to fly, and by the bad conducting power of feathers, the heat of its body is retained.

Again, how often do people trample on a worm, and think it the vilest and most loathsome of creatures? And yet they do not know that in the economy of nature it acts a very important part. It is his province to consume on the surface of the ground the softer parts of decayed vegetable matter; the more fibrous parts he conveys into the bosom of the earth, where they also decay in the course of time. Whatever he consumes or carries away, returns, therefore, sooner or later to the soil, in a form better adapted to the sustenance of vegetable life; and in this way, he is constantly engaged in lending assistance to the plough, or in supplying its place wherever human industry seems to be yet unknown. But the utility of this most despised of beings does not stop here; he loosens the soil at the roots of trees and plants, and facilitates their irrigation from the clouds; he assists very materially in draining the surface of the land of superfluous moisture, by excavating subterranean channels, through which it escapes; and he lastly furnishes food in his own body for almost every thing which moves on the earth, in the air, or in the sea. Now, surely it is interesting—surely it is important to reflect on the operations of a worm! and we cannot reflect on his important operations, without admiring the wisdom which could make so insignificant a being subservient to such mighty purposes. It would be delightful to enlarge on this most interesting division, but I am compelled to pass on.

I observe, then, secondly, that an enquiry into the nature and constitution of the world, would lead us to notice *the vegetable kingdom;* and here we shall find at least equal marks of the wisdom and beneficence of the Creator. In noticing the distinctive marks of the two kingdoms, we shall find the animal descending so low, and the vegetable rising so high, that it will be almost impossible to draw the line

of demarcation—to tell where the one begins and the other ends. Then again, in noticing the peculiar habits of different plants, we shall find more than sufficient to amaze and delight us. We may gaze with pleasure on the beautiful colour of the rose, or the soft shading of the violet; we may love the fragrance of the garden and admire the arrangement of the *bouquet.* But these are mere pleasures of sense, which last but for a moment. The mind derives its greatest happiness in contemplating the physiology of vegetables, and their immense usefulness in creation. But on this subject it is impossible for me to enlarge. The manner in which they derive their nutriment from the soil; their circulation, respiration, and many other most interesting functions, I must altogether pass over; neither can I stop to notice particular varieties, in which we see remarkable adaptations to the purposes they have to serve; nor yet can I dwell on the part which they perform in purifying the atmosphere in which we live: but surely the wonders of the vegetable world ought to be known to some extent by every class of individuals. The more they are known, the more delight will a person take in viewing and contemplating them.

Again, an enquiry into the nature and constitution of the world, will lead us to notice *the mineral kingdom.* Yes, down into the bowels of the earth shall we descend, and there we shall find enough to satisfy the keenest curiosity. Afterwards we shall notice the different strata of the earth, and the geological changes which have taken place on the surface of the globe. The result of this will be the settled conviction that, although there are many things to gratify us—much to interest us on the surface of the earth; there are also many others of intense interest within it. Still further, in examining the animal, vegetable, and mineral kingdoms, we shall be led to enquire into the effects they mutually produce upon each other; this will lead us to the subject of *chemistry*, and we shall find that the world itself is a great chemical laboratory, where chemical operations are continually taking place on a great and extensive scale, and either immediately give rise to, or at least are intimately connected with, all the phenomena which diversify the face of nature.

Now, I ask, *ought not men* who have a capacity to comprehend the topics to which I have adverted, to have their minds directed to their contemplation? Can the low and grovelling pleasures of the sensualist bear a comparison with the delight which must result from their patient study? Oh, my friends, if you were placed with a fellow-creature who was deaf and blind, on some delightful spot of earth where the sky above you was serene and calm—not a cloud to darken its immense expanse—where the water before you was clear as crystal, not a ripple on its placid breast—where the flowers around you had their loveliest tints—the ground on which you stood its richest verdure; and the birds their brightest plumage; and if at the time you saw all these created beauties, the sound of distant music fell in sweet melody on your ear, would you not deeply and sincerely lament that he who stood by you, was insensible amidst that which afforded you so much delight? Yes, selfish as we all by nature are, I know you would wish him to participate in your pleasures; and on the same principle, we who to some extent can perceive and appreciate the beauties of the

world in which we dwell, would give instruction to others in order that they may partake of kindred joys.

Again, the subject of *history* is one which should frequently be brought before the members of Mechanics' Institutions. The history of our own country is full of interest; but the attention should not be confined to this—it should be directed to surrounding nations—to the different nations of the world in fact, both of ancient and of modern date. I have not time to point out the many advantages which would result from this study; but it is one which could not fail to be attractive to persons of every age, and perhaps of every variety of mental constitution. History might be taught either in classes, or in a series of lectures, which would bear repetition till those who attended had become thoroughly conversant with the facts.

Again, *biography* may be made not only pleasing, but occasionally exceedingly useful. We often rise from a perusal of the lives of deceased eminent individuals either better or wiser; the virtues which have adorned the life of the philanthropist, may so win upon our affections as to induce us to emulate his goodness and benignity; the glowing ardour of the patriot may excite in us a reciprocal regard for our country's good, or a knowledge of the advancement which some of the arts or sciences made under the superintendence of the master spirits of the age—a knowledge of the difficulties with which they had to contend, and the means by which they overcame them, will cheer us in the midst of our toil, and animate us to still more vigorous exertions. Biography will teach us one lesson more—it will teach us that in almost every instance where exalted talent has been found combined with moral rectitude amongst the poorer classes, it has been fostered and rewarded by those who move in more elevated circles. I fear that this sentiment will not be admitted by all those who now hear me; but I am confident of its general correctness, the exceptions are comparatively few. Yes, as Alpine plants do not wait for the genial influence of the sun, but force their flowers through surrounding snow, and as *then* the flowers participate in the warmth and brightness of the solar rays, so the genius of the man is not extinguished by the unfavourable circumstances in which its possessor may be placed; it bursts through the poverty and gloom by which it is surrounded, and *then* the sunshine of patronage and applause, and substantial reward will light upon it. Many instances of this might easily be cited. I would have then, biographical sketches of eminent deceased individuals frequently brought before the members of the Institution.

Again, since all men are placed under the control of laws, I would have the people instructed in *the principles of jurisprudence*, and it should be an object not only to tell them what the laws are, but to endeavour to make them respected. I need scarcely say, that the great majority of persons are exceedingly ignorant of the subject which I am now recommending as a branch of instruction.

Again, I would teach the members *the principles of government*, —I mean national government. I would show how greatly we are indebted to some fixed form of government—I would point out the different forms which have existed or which do exist in the world; and I would endeavour to point out the advantages and the disadvantages

which attach to each. On this topic, the great mass of mankind are exceedingly ignorant; but surely, as subjects of a particular government, we ought at least to know something of that form under which we live; and it would be an additional benefit if we were acquainted with the peculiar advantages which it possesses over others.

Again, as we are essentially a commercial country, I would teach the people *the principles of commerce and political economy*; and I do think if persons of every class were better acquainted with these topics, we should see less wrangling and bitterness, and jealousy than we are now from time to time compelled to witness. Yes, I have little hesitation in saying, that if masters and men were mutually better acquainted with the principles of commerce, and understood more of the science of political economy, we should not so frequently have to lament the misunderstandings which too often take place between them. If each man knew what was his own right, and paid respect to the rights of others, we should have neither combinations nor unions, nor "turn outs," to disquiet and disgrace our town. But I would go further, and say that every man *ought to be* acquainted with these subjects—every man has property of some kind, and he ought to be acquainted with the laws of property—every man has social duties to perform, and therefore, he ought to be acquainted with the laws by which society is regulated.

Again, I would teach them *domestic economy*. This is a subject which is not nearly sufficiently attended to by any class of persons; but from my own observation, I should incline to the opinion that there is more wanton extravagance amongst the poor than amongst the rich. I would show them how they may economize fuel; what great improvements may be made in cooking, and how they may extract good and nutritious diet from substances which they now entirely disregard.

Once more, I would direct the attention of persons of every class to the great subject of *mental philosophy*. I would teach them the nature and constitution of the human mind, investigate its various powers, inform them of its vast capabilities, analyze its workings, shew them the necessity of its proper cultivation, and lead them to adopt the language of the poet—

> "Were I so tall to reach the pole,
> And grasp the ocean with a span,
> Still I'd be measured by my soul,—
> The mind's the standard of the man."

I would expatiate to them on the principles of *morality*, and thus endeavour to fit them for the discharge of the various personal and relative duties which devolve upon them.

But then, it will be asked, how would you do all this? And here I must admit, that as Mechanics' Institutions are at present constituted, it would be impossible to accomplish all that I have suggested. It is evident that a number of competent teachers must be engaged, to whom a regular salary would have to be paid. Our receipts, however, would not allow of this. But I am one of those who believe that the happiness and prosperity of the country are closely connected with the intelligence and morality of the people; and, therefore, I think it would neither be an extravagant nor a short-sighted policy, if the na-

tional funds were to be made available for furthering so immense a national benefit. In various departments of the state, it would soon be shewn, that the money had not been uselessly expended. But let me not be misunderstood. I do not say that great national or great social advantages will result from merely enabling persons to read or write, or even from carrying instructions much farther than this. You must give a proper direction to the knowledge which you commmunicate; you must endeavour, by the sedulous use of proper means, to impart, at the same time, morality and religion. We have more reason to complain of the low tone of religion and morality, amongst the people, at the present day, than we have of the prevalence of ignorance. The moral and religious instruction of the rising generation is not only too much neglected in public institutions, but infinitely too much so by the natural guardians of youth in every class of society.

I will only further add, that the energies of the pupils, in the acquirement of knowledge, should be from time to time excited by the occasional exhibition of prizes. I am sure that the distribution of rewards amongst young people is of great service. It is not for the intrinsic value of the prize that they contend, but it is for an honourable distinction amongst their fellows.

But it is time that I should pass on to the single word of *admonition* which I promised at the commencement of my address. I may begin by expressing my sincere regret that the advantages which the Institution holds out are not sufficiently appreciated by the town at large. I infer that they are not from the comparatively scanty number of those who are connected with us.

When the Institution commenced its proceedings, in 1832, there were 1100 persons belonging to it, either as apprentices or members.—After the first quarter, however, the novelty of the undertaking fell off, and so did our numbers, and we continued in a very languid state for a considerable period. At present, we are rather recruiting; but now, our numbers do not amount to more than 547 in the whole. Of these, 224 are apprentices, 106 benefitted members, and 180 honorary members. The number of ordinary, or benefitted members, has fallen off from last year; but the number of the honorary members has more than proportionately increased; in fact, many of the former class have joined the latter. In addition to the number of honorary members which I have stated, there are eleven admitted to this class in consequence of donations, and twenty-six on account of gratuitous services rendered to the Institution. Now, when we consider that a person may be an honorary member by paying 10s. 6d. per annum, or an ordinary member by paying 2s. 6d. entrance-money, and 8s. per annum subsequently, or an apprentice, by paying 1s. 6d. entrance-money, and 6s. per annum; and when we recollect the privileges which the individuals enjoy, of attending the classes, lectures, &c., it is certainly a matter both of surprise and regret that a greater number do not eagerly avail themselves of the advantages we hold out.

Of the 224 apprentices, 100 were connected with the Institution last year, and 124 have paid their entrance-money as new beginners. It not unfrequently happens that youths enter to the Institution one half-year, and leave it the next. This is, however, to say the least

of it, very injudicious; it is not to be expected that much benefit can have been derived during a single half-year. Parents should see to this, and not allow their children so soon to put themselves without the pale of instruction. It is only so much money thrown away.—And young men themselves must not be discouraged because they do not acquire knowledge so fast as they imagined they should do. It requires patience and perseverance; but only go on, you will gain your object in time.

The majority of the ordinary members of the Institution have joined it merely for the purpose of attending the lectures; only very few of them attend the classes. It is probable many more might attend with benefit to themselves.

Of the honorary members, some have joined the Institution for the laudable purpose of benefitting the working classes, and others for the sake of hearing the lectures. To both these, I may say that it would be decidedly better for the welfare of the Institution, if they would shew their interest in our proceedings, by visiting the classes, and occasionally making suggestions for improving our plans of operation.

I must here, also, again express my regret that the lectures are by no means so well attended as they ought to be. It is true we have occasionally large audiences, when we have a stranger lecturing, or when it is expected that there will be a number of amusing experiments.—But if there are to be no experiments, and a townsman is to address you, he will too often have only a very thin auditory. Now this ought not to be the case. You either do or ought to come here for information, and not for amusement; and, therefore, you should come whether there are to be experiments or not. And then, again, when a townsman lectures, you should remember that, for the most part, it costs him a very considerable time in preparation; and, I think if he is kind enough to give you his time and his labour, you ought, at all events, if possible, to pay him the compliment of listening to him.

I have one word to say to those who constitute the Committee of this Institution. An honour is conferred upon you by appointing you to the situation which you hold. You should see to it that you diligently discharge your duties. An Institution of this kind requires great zeal and energy, for its proper management. On you its management devolves; take care that its success is not endangered by your inattention. If the Institution is likely to be productive of the benefits I have described, it deserves, it *demands* vigorous exertion. Its interests have been committed to your keeping; be careful not to prove yourselves unworthy of the trust.

One word of *encouragement*, and I have done. There are persons in the world who would jeeringly ask us where are the boasted advantages of Mechanics' Institutions, and similar societies? and they would tauntingly add, "there is no decrease of crime and immorality in the country." Such individuals should remember, however, that we must look for the fruits of our labour amongst the *rising*, and not amongst the *risen* generation. And they must further remember, that we cannot expect much good to result from our labour, so far as decrease of crime is concerned, unless the efforts of our Institution are

seconded by the preceptive lessons and exemplary conduct of parents at home.

But, my Friends, let us not forget that the tide of knowledge is set in,—that this is emphatically the age of intellect, (too exclusively so, I admit,)—that it is impossible to stop the onward progress of the wave which is now rushing on the sea,—that it will break down every barrier by which we attempt to impede its progress;—but that we may give it a direction. Oh, then, remembering that knowledge is power, —a power for evil or for good, let us see to it that we use our best endeavours to turn the waters into a proper channel,—then they will fertilize and fructify our land,—the poisonous plant shall no more grow in our valleys,—but the cheering, and refreshing, and delightful fruits of wisdom and of virtue shall spring forth luxuriantly on every soil. What, though weeds and thistles may be rampant now, their place shall ere long be usurped by the fairest flowers and by the sweetest fruits. Our duty is to proceed,—our march is onward,—our success is sure.

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