

Letter concerning the Royal and other scientific institutions : respectfully addressed to their managers, proprietors, and subscribers / by M.L. Este.

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LETTER

XI

CONCERNING

THE ROYAL AND OTHER SCIENTIFIC

Institutions :

RESPECTFULLY ADDRESSED TO THEIR

MANAGERS, PROPRIETORS, AND SUBSCRIBERS.

By M. L. ESTE, Esq.

Late Lecturer on Animated Nature, and on the Philosophy of the Animal Economy
at the Royal Institution of Great Britain ; Member of the Royal College
of Surgeons, London ; and of several other learned Societies
at Home and Abroad.

CONTAINING

HIS PROSPECTUS

FOR THE INTRODUCTION OF A PARTICULAR BRANCH OF
SCIENCE ;

HIS CORRESPONDENCE,

TOGETHER WITH SOME GENERAL REMARKS UPON THE
MANAGEMENT OF SCIENTIFIC INSTITUTIONS.

LONDON :

PRINTED FOR

JAMES RIDGWAY, 170, PICCADILLY,

OPPOSITE BOND STREET.

1810.

CONSTITUTION

THE ROYAL AND OTHER SCIENTIFIC

Institutions:

MANAGEMENT AND ADMINISTRATION

MANAGERS, PROPRIETORS AND SUBSCRIBERS.

BY M. J. WELLS, Esq.

Part of the Royal and other Scientific Institutions, and of the Proprietors, Managers, and Subscribers, of the same, in the year 1810.

HIS PROSPERITY

FOR THE ESTABLISHMENT OF A PARTIAL BANK OF

HIS CORRESPONDENCE

TOGETHER WITH SOME ACCOUNTS OF THE MANAGEMENT OF SCIENTIFIC INSTITUTIONS

LONDON:

DAMPS RIDGE, PUBLISHED BY
IBOTSON AND PALMER, PRINTERS, SAVOY STREET, STRAND.

1810.

LETTER, &c.

WHILE the following proposals of December 14, 1808, and of January 28, 1809, were submitted to the consideration of the Board of Managers of the Royal Institution, and before the gentlemen of that Board had passed their resolution of January 30, 1809, for their adoption, I had, besides the following correspondence, some little intercourse with that Board, through one of its influential members, who did me the honour of calling upon me several times, who, with great kindness solicited the attention of the managers to my papers, and who took successful pains in recommending them to the favourable notice of the gentlemen with whom he was acting. On the 1st of *February* 1809, when I accepted an engagement from the Board, through that gentleman, to deliver a course of *six lectures*, to commence from the middle of March, I was given to understand

that those lectures were to be experimental or probationary lectures, and I was then informed other lectures might perhaps have been desired that same year, if the first six were favourably received : and I was accordingly asked, whether I should be ready to deliver a *second course*, if required, immediately after the first. Previous to this, I had twice stated in my papers (on January 8th and 28th) that “ unless my plans were adopted with a view of being rendered PERMANENTLY useful to the Institution, I could never have any distinct or separate advantage in an undertaking, which was not to be executed without great thought and study, and which would require many drawings, engravings, and models for the necessary demonstrations.” I had for this purpose twice requested them to compare in their deliberations, the whole nature and bearings of my statements, with the objects they had in view ; and had twice represented to them, in writing, the pains and expense which were necessary to do justice to the subject.

In consequence of the several written statements submitted to the managers, and of the intimations I received, when I made my engagement, I proceeded in my undertaking, fully persuaded, that if my plans gave satisfaction, they were to be adopted.

I spared neither pains nor expense to ensure

their success. I publicly noticed in every lecture I delivered, these conditions of my agreement: several of the managers were present. I never was checked nor contradicted in my statement, and I further announced by advertisement in the newspapers, the publication of a work that was to serve as an index or key to my whole undertaking. These events are too recent to be forgotten.

The many testimonies of approbation with which this subject was originally received by a numerous audience, at the Royal Institution, its successful introduction, since that period, at the other scientific institutions of this metropolis, have fully evinced that this important study may be illustrated not only with the strictest decorum, but that, when properly treated, may afford *no less* elegant entertainment, than any other branch of science. We accordingly see the *philosophy of the animal economy*, assuming that high rank among the sciences to which it is justly entitled, and becoming daily, like botany, a more and more fashionable general pursuit. Before this trial, however, several objections were made to my proposals by the gentlemen entrusted with the management of the Royal Institution. The plans could not be adopted, they imagined, *without trespassing upon the province of some other professors*. They were “*SCRUPULOUSLY*” delicate

upon that point, and could not divest themselves of several ideas, which at first appeared to them INSURMOUNTABLE difficulties.

Such expressions were frequently repeated to me, and produced the following correspondence by which those difficulties were removed. Knowing that the Board of Managers consists of noblemen and gentlemen of the highest rank and respectability in the kingdom, perfectly sympathising with them in the propriety and delicacy of their feelings, lest I should trespass upon the province of some other professors, (an unnecessary apprehension,) I frequently asserted the implicit reliance I had in their honour; and stated in my correspondence that my sole wish in communicating my suggestions to them, was to put them *fully* and UNRESERVEDLY in possession of *all my views*, thereby to assist them in forming their judgment upon my proposals—which I requested them to modify; as I was only anxious to proceed with them in the most liberal manner, and to meet their wishes in every respect; (vide the Correspondence, Proposals, No. 2.) fully confident, that if they approved of my suggestions, they *would not adopt them to my exclusion*, and that they would observe in their arrangements, with respect to myself, the *same delicacy* they felt and had often expressed for others. As they would not allow me to tres-

pass upon the province of others, I was fully persuaded that they would not permit others to interfere with mine, particularly if they approved of my plans, if they adopted them, and still more especially if I succeeded in recommending my undertaking to favourable notice, in the six probationary lectures I was under engagement with them to deliver.

There is another point to which I would request one moment's attention—I was not a proprietor, and therefore knew nothing of the state and management of the concern, but from report; I nevertheless felt an interest in its prosperity.

As I had resided from my infancy, in the course of my education, at almost every university of any celebrity in England, France, Italy, and Germany, I thought it my duty to communicate to the managers of the Royal Institution the result of the observations I had made in my acquaintance with scientific establishments. I did this on two accounts; for the benefit of the institution over which they preside, and with a view of recommending the particular department I was endeavouring to introduce in it. (Vide my Proposals, No. 1. and No. 3.)

I stated that I felt it incumbent upon me to repeat my opinion that the branches of science which admit of demonstration, experiment, and

illustration, are best calculated, by a mixture of amusement and instruction, to draw attention, and thereby to give stability to scientific institutions.

Such are experimental philosophy, astronomy, chemistry, and the science I proposed; to these alone I stated many universities are indebted for their foundation and celebrity.

That these statements of *December* 14, 1808, and *January* 28, 1809, did meet with the approbation of the managers, will appear by contrasting their present with their former arrangements.

25th February, 1809.

ROYAL INSTITUTION.

The following is the Arrangement that has been made for the Lectures of the present Season.

Mr. Davy, a course on Chemistry.

————— on Electro-chemical Science.

Mr. Pond, on Astronomy.

Mr. Wood, on Perspective.

Mr. Samuel Wesley, on Music.

Rev. Mr. Crowe, on History and Poetry.

Mr. Este, on Animated Nature.

Mr. Fletcher, on Natural Philosophy.

Mr. Allen, on Mechanical Philosophy.

Rev. Mr. Dibdin, on English Literature, *5th course*.

Dr. Smith, on Botany.

27th November, 1809.

ROYAL INSTITUTION.

The proprietors and subscribers are informed, that the following arrangement is made for the Lectures of the ensuing season, and that they will commence on Monday, the 18th December.

Mr. Davy, on Electro-chemical Science.

—————on general Chemistry, and its applications to Nature and Art.

Mr. Dalton, on Natural Philosophy.

Mr. Allen, on Practical Mechanics, and Mechanical Inventions.

Mr. Pond, on Physical Astronomy, and its Applications.

—————on Popular Astronomy.

Dr. Smith, on the Philosophy of Natural History.

(Vide the Morning Chronicle, *November 30*, 1809, for the advertisement which states, that lectures will be given on the Philosophy of Natural History, containing an “*exposition of the economy of Living Beings*,” by James Edward Smith, M.D. F.L.S. &c. &c. The same advertisement appeared in other papers.)

I was not a little surprised when it was put into my hands; it shows, 1st, That those lectures alone, are continued which admit of illustration and experiment. That a distinguished gentleman, Mr. *Dalton*, hitherto unconnected

with the establishment, is by a new arrangement brought from Manchester, in addition to the professors formerly engaged. That notwithstanding all the objections to my proposals; notwithstanding the *severe difficulty* the managers laboured under of *divesting themselves of the ideas* they entertained against them; notwithstanding the “*scrupulous delicacy*” they felt, *lest I should trespass upon the province of other professors*, (a delicacy I firmly expected to have experienced from them myself;) notwithstanding the conditions frequently presented to them in my papers, and the intimations often repeated to me by a most respectable member of their committee; notwithstanding the publications I made, under their immediate auspices and sanction, in my lectures, and by advertisement in the papers: notwithstanding all these considerations, Dr. Smith, for many years past their lecturer on botany, is removed from the very department in which he is particularly eminent, and is announced for that which I was engaged to introduce, and which, at no inconsiderable pains and expense, I had actually introduced at the Royal Institution.

Far, very far am I from wishing to detract from the merit of any of my contemporaries, out of office or in it; those who honoured me with their attendance at my lectures, will do me the favour to recollect, that it never formed any

part of my plan, to refuse a full and heaped measure of justice to the aids I had received, and to all who were endeavouring either to improve their age, or to adorn it, whether they happened to be my colleagues or not. I never sought to throw a slur upon any one of them, nor to check any man, for a moment, in his career, by any jealousy or any policy. It never has been, it is not, and I hope it never will be, any part of my plan so to do.

In the year 1792, Dr. Smith gave lectures in London on *botany and zoology*, which I attended; those lectures were professedly nothing more nor less than a plain exposition of the system of Linnæus, or the simple natural history of plants and animals, merely as it rests upon the *characters of their external form*.

The character of Dr. Smith is too well and generally established to require any encomium from me. I have always professed the highest respect both for his professional talents, and his private character; for I am sufficiently acquainted with him to know and to admire the benevolence and excellence of his disposition. I hope I shall not give him the slightest offence, nor throw any doubt upon his abilities, by stating, in support of my own humble pretensions, my belief, that he is called upon, for the first time, to explain the philosophy of the animal economy, to which pursuit he may perhaps re-

collect, that the studies of my life have been particularly devoted.

From the many testimonies of approbation with which my labours were honoured by the numerous and enlightened assembly of the subscribers, (and I respectfully appeal to them if it was not so,) I trust my conduct in fulfilling my engagements must have given satisfaction to the managers of the Royal Institution. I never heard to the contrary, though several opportunities of expressing dislike, if they had had any to express, were offered them in the course of my correspondence.

It is not my intention to wound the feelings of the noblemen and gentlemen who govern the Royal Institution. I cannot suppose they would wish to injure any one, or still less that they would *intentionally* deal unfairly by me. *But small things are great to little men, and reputation* ought to be the portion of every one who would live with the elegant part of society.

Though I have not any favour to ask of them, they must, and I am sure they will, do me the justice, to recollect my professional character, together with the circumstances in which I have been placed by my intercourse with them, and by their arrangements.

This short letter I hope will explain what those are; and by recalling to their mind, and putting before them, in one point of view, my

correspondence, and the whole of my conduct towards themselves and their subscribers, will show that it is not by any failing on my part that I am excluded from their present lists.

In the multiplicity of more important engagements, and in a highly commendable zeal to serve the establishment, over which they preside, the managers of the Royal Institution have probably lost sight of the fair pretensions of the author of these proposals, which, in their deliberations, they evidently have thought proper to adopt.

M. L. ESTE.

PROPOSALS

For a Course of Lectures on the general Physiological Structure and Organization of Man and other Animals; submitted by Mr. Este to the Consideration of the Board of Managers of the Royal Institution.

IN tracing the different establishments of Europe for the cultivation and diffusion of science and the arts, attention will generally be found directed, first, to such branches of science as, requiring demonstration and experiment, cannot be illustrated without the aid of public lectures, and practical expositions of the grounds on which their principles rest. Experimental philosophy accordingly precedes and paves the way to researches of a higher and more intricate order; to astronomy, to chemistry, and to the most diversified and combined investigations: natural sciences are thus seen in their progress advancing together, mutually assisting each other, and flourishing most successfully in society. Where the vegetable and mineral kingdoms are explored, it cannot but be very desirable that the *animal kingdom*, a part of nature surely *not less interesting* than the other two, should be examined and explained, so far as it can be done, with the strictest regard to decorum, and the nicest feelings of an audience composed of both sexes.

Mr. Este, perceiving in the Royal Institution, a deficiency in a branch of science to which the study of his life has been chiefly devoted, considering that as zoological lectures were formerly given there, the *gene-*

ral physiological lectures he proposes to deliver, may not only be compatible with the plan of the establishment, but likely to contribute to its prosperity, repectfully submits his proposals to the consideration of the managers, trusting, that the circumstances above-mentioned, together with the peculiarity of his professional education, may justify him in venturing to address them.*

The superficial natural history of animals, resting upon the characters of their external form, is, unquestionably, a pleasing pursuit; the study of the structure and conformation of their internal organs, of the duties, offices, or functions, those organs are adapted to perform, may be fairly represented as a source of useful entertainment, and as a study in which every individual must feel some share of interest; for what can be more interesting to man than to know himself? than to survey and compare his own organs with the corresponding organs of the other classes of the animal kingdom? Quadrupeds, birds, amphibious animals, fishes, and the lower tribes of insects and worms? A comparison, throwing light upon his own human economy, and showing the fair title he has to his rank in the creation; as his organization establishes between himself, and all surrounding nature, a more general connexion and widely extended intercourse than can be enjoyed by any other description of being; and displays infinite goodness, consummate wisdom, and the magnificence of the Creator in the grandeur of the work: contemplating which, the soul, turned inward on itself, is impressed with awe, gratitude, and admiration.

The principles of structure may be demonstrated on drawings, on models, and on engravings; and it is presumed the explanations may be delivered with scrupulous caution, so as not to give the slightest cause of offence to the most delicate and refined audience.

* Vide the annexed statement.

Should the managers of the Royal Institution think favourably of his proposal, Mr. Este will endeavour, by doing justice to the subject, to promote, as far as he may be able, the reputation and interests of the establishment.

62, *Great Mary-le-bone-street*,
December 14, 1808.

STATEMENT

Annexed to Proposals, (No. I.)

Mr. Este began his professional studies in the year 1792, in London, under Dr. *Baillie* and Mr. *Cruikshank*; at the end of that winter procured introductions to the professors of the university of *Pavia*, in Italy, where he went, and remained for nearly four years under Professors *Scarpa*, *Spallanzani*, *Fontana*, and *Volta*. In 1796, he placed himself for six months under Professor *Walther*, at Berlin, likewise for six months under *Prochuska* and Dr. *Frank*, at Vienna. Mr. Este in 1798 returned to England, and completed his studies under Dr. *Monro*, in Edinburgh, and under Messrs. *Cline* and *Astley Cooper*, in London. In 1800 he held a commission as an assistant-surgeon in the Guards, and accompanied them to Egypt. In the peace of 1802 he visited *Paris*, and remained there during the whole interval of that peace. In 1804, from possessing a knowledge of the French and Italian languages, together with his professional attainments, he was appointed by the Right Hon. Lord Hawkesbury, *Physician* and *Private Secretary* to Mr. Charles Lock, his Majesty's Consul General to Egypt, and to the eastern parts of the Mediterranean.

He has the honour of being a member of the Royal College of Surgeons, as well as of several other learned societies at home and abroad.

Mr. Este takes the liberty of presenting to the Managers of the Royal Institution some statements in explanation of the proposals he had the honor of submitting to their consideration on December 14, 1808, to assist their judgment in forming a decision upon the propriety and advantage of admitting *demonstrations* on drawings, models, and on engravings, necessary to illustrate so much of the structure and organization of man and other animals, as he conceives may be illustrated with the strictest decorum, and without giving the slightest offence, to an audience consisting of both sexes.

Anatomy and physiology are too intimately connected to be considered separately; inasmuch as physiology explains the animal functions, or, in other words, the uses of the different organs, while anatomy shows their structure; the uses of the organs can never be rendered intelligible till their structure is understood; the demonstrations of structure must therefore naturally be associated with the reasonings upon the uses.

Mr. Este respectfully requests permission to state his opinion, that *nearly the whole* of the animal economy may be comprised in the lectures he proposes to deliver; that almost all the organs, and all their functions may be exhibited, as well as explained; and trusts that the following statement may disclose his plan, and furnish sufficient data to enable the managers to form their decision.

The drawings, models, and engravings, for their demonstrations, will be found to amount to little more than such as are used for conveying instruction in the fine arts; and such as are frequently referred to in polished society for elegant amusement; such as Hans Holbein's Dance of Death—Monumental Sculpture, by Roubilliac, &c.

I. As Architects, in raising an edifice, first lay a foundation on which they build its parts, the SKELETON giving shape and support to animal bodies should form the first part of the course.

The demonstrations will require *drawings of skeletons* in different attitudes and points of view ; and it is presumed the *whole length skeleton will be the only whole length figure required*; as all the remaining demonstrations may be made on drawings of detached parts of the upper divisions of the figure. The skeleton may be shown collectively, and *in parts*. The several modes in which the parts of the skeleton are articulated or joined together, will follow next in the order of natural succession.

DEMONSTRATION.

The *articulations*, or joints—their construction and motions ;—the *cartilages* and *ligaments* on drawings and on engravings.

The physiology of the skeleton will conclude the first part.

II. The prop-work of the fabric being finished, the next step will be to exhibit collectively and separately the instruments by which it is put in motion.

DEMONSTRATION.

Simple uncoloured outlines of the *muscles* of the head, neck, and of the upper extremities. The mechanism of the lower extremities bears such resemblance to the upper, that little need be said concerning them.

Physiology of the muscles, muscular motion will close the second part.

III. THE BRAIN,—the place of residence of the mind, with all in its appendages necessary for the union of spirit or soul and body; the NERVES, her instruments for governing and acting upon the body, may be next produced.—Demonstration,—the *brain* and the *whole nervous system*, which may admit of great variety of illustration on drawings and on engravings.

IV. The organs establishing intercourse and connection between the mind and external objects—the *eye*—the *ear*—the organs of *smell*, of *taste*, of *touch*, of *speech*, of *the voice*—may each allow of full and extended demonstration, on drawings, models, and on engravings, *physiology of the brain, nerves, and senses*.

V. The different organs, when so put together, suffering continual waste and destruction, require the following functions for their restoration, maintenance, growth, and nourishment: viz. *digestion, chylification, sanguification, respiration, circulation, and assimilation*. The mode in which the nutritious part of our food is selected and separated in the digestive organs, may be mentioned with caution, and *explained by analogy*, as the roots of plants select from the soil in which they thrive their nutritious fluids, and reject such as are unprofitable. But the demonstrations may here extend through the *lacteal* and *lymphatic* systems to the *heart*, the *lungs*, the whole circulating system of *arteries and veins* in the head, neck, upper extremities, and by description and comparison in the lower extremities, with the physiology of the preceding organs and systems.

VI. All that is above stated on human organization may in like manner be shown and explained in the *six classes* of the animal kingdom, in quadrupeds, birds, amphibious animals, fishes, insects, and worms.

After this summary statement of the various subjects which may furnish ample materials for curious and useful lectures, it remains for the managers of the Royal Institution to consider whether the subjects proposed by Mr. Este are of sufficient importance to deserve their encouragement and patronage? In stating this observation, and his remarks upon it, Mr. Este respectfully trusts the managers will acquit him of every supposition of presumption; as his sole wish in communicating his suggestions is to put them fully and unreservedly in possession of his views. After the explanation Mr. Este

has given of the very guarded manner in which he proposes to conduct both his lectures and illustrations, if a doubt could exist in the minds of the managers of the possibility of a violation of delicacy or decorum, he begs leave to remark, that an honorable and accomplished lady of acknowledged taste and excellence in a laborious art, some years ago applied to a teacher of anatomy, to be instructed, and was by him instructed in anatomy, on drawings and models similar to those Mr. Este proposes to use, and such as *are used* for conveying instruction in the fine arts.

Having thus communicated his plan, Mr. Este takes the liberty of requesting the managers of the Royal Institution will have the goodness to view it in all its bearings, and to *deliberate maturely* on the subject; as he respectfully conceives, *that unless it be adopted, with a view of being rendered permanently useful to the institution, he can never have any distinct or separate advantage in such an undertaking*, which cannot possibly be executed without great thought and study, and which will require many drawings, engravings, and models for the necessary demonstrations.

62, Great Mary-bone Street,
January 8, 1809.

“ *At a Meeting of the Managers of the Royal Institution of Great Britain, held on the 9th of January, 1809.*

“ Read the proposal of Mr. Este respecting a course of lectures on physiology and comparative anatomy.”

“ Resolved, That Mr. Bernard* be requested to inform Mr. Este that, upon full consideration, the mana-

* Now Sir Thomas Bernard, Bart.

gers regret that it is not in their power to accept of his offer, not merely upon the ground that they have lately declined two very respectable offers of the same kind, but that they cannot convince themselves that scientific lectures can be given on physiology, and comparative anatomy, without offence to a part of their audience."

Extract from the Minutes,
Albemarle Street, M. EASINGWOOD.
9th January, 1809.

LECTURES

On the Comparative Fitness of Animated Nature to its Situation and Functions.

Mr. Este takes the liberty of stating to the managers of the Royal Institution, in reply to the resolution passed upon his proposal at their meeting on January 9, 1809, that he should not have trespassed further on their time and attention, but have remained satisfied with their decision, had it not been accompanied with a suggestion to him that certain lectures, "*On the comparative fitness of animated nature to its situation and functions,*" might be adapted to the plan of their establishment.

Mr. Este conceives that he may without the imputation of partiality, or without seeming to recommend too warmly a favourite pursuit, venture to represent the subject not only as curious and useful, but as likely to afford, if properly treated, no less elegant entertainment than any other branch of science; he therefore, with a view to meet the wishes of the managers, and in compliance with their suggestion, again respectfully submits for their consideration a summary statement of such parts of the subject as he presumes may be explained with propriety and with advantage.

STATEMENT OF SUBJECTS. The *distinctions* be-

tween the different classes of animated beings; and the *analogies* or resemblances by which those different classes approach each other and the vegetable kingdom.

All the varieties of the LOCOMOTIVE power.

While vegetables remain fixed, subject to every thing that moves, animals enjoy the power of volition, determine, act, and communicate with external objects by means of their senses. Many species protect themselves from injury by force, others by swiftness, address, cunning. While animated beings take their food at intervals and require time to prepare that food for the complicated purposes of secretion and nutrition; while they search for, and select peculiar kinds of food, vegetables are *perpetually receiving* nourishment, and can receive only such as is conveyed to them by the different elements.

The structure and organs, the growth and nourishment, perpetuation and decay of nature, in the different classes of animated beings.

A short account of the structure and organization of man, the standard of animal perfection, may be followed by a similar account of structure in other living creatures. The adaptation of that structure and form to the elements in which they live and move, to their modes of existence, as of quadrupeds to the earth, fowls to the air, fishes to the sea, amphibious animals to land and water, reptiles to their ways of life, &c. may all be treated of.

The connexions of form and structure with the element, habits, manners and disposition of each class, their respective ranks in the creation, and the circumstances of *their economy and life*.

The functions necessary to the existence of animated beings, the action of the brain and nerves. Respiration and the elaborate preparation and circulation of the vital fluid with which respiration is intimately connected; the secretion of animal heat, resulting from

respiration and circulation, technically termed vital functions, because if suspended for a few seconds only, life must be extinguished.

The apparatus of organs for performing these functions, and the variety of the organization in the several classes, especially as far as concerns the respiratory systems of *fishes*, of *birds*, and of *amphibious animals*. The introduction of air into the bodies of INSECTS.

All the motions of animated beings performed by the mechanism of muscles, tendons and articulations in obedience to the will,* and the laws of those motions may be contrasted with the involuntary motions, or such as are wisely placed *beyond the controul of the will*, as respiration, circulation, secretion, &c. technically called VITAL motions.

The consideration of MOTION as giving birth, growth, perfection, death and reproduction to animated beings as the object or cause of all SENSATIONS.

THE SENSES and the variety in the structure of the organs of sense, as adapted to the habits and elements in which the creature lives.

The offensive and defensive habits and actions of animated beings. Their instincts.

Their domestic history, dispositions, social intercourse, gregarious, migrating, and solitary habits; sagacity; the contrivances and arts in their several operations.

Their relation to each other in the scene of animation and destruction, perpetually going on in the economy of nature.

It is presumed these subjects may be elucidated and enlivened by variety of anecdotes and remarks to the last scene of animated nature, viz. its DISSOLUTION.

Mr. Este has thus again laid before the managers, briefly, but *he trusts explicitly*, such a sketch or outline as he hopes may put them in possession of his plan.

* As progressive motion, walking, flying, swimming, creeping.

He feels it incumbent on him to repeat his opinion *that the branches of science which admit of demonstration, experiment, and illustration, are best calculated, by a mixture of amusement and instructions, to draw attention, and thereby give stability to scientific institutions; such are chemistry, astronomy, experimental philosophy, and the science proposed; to these many universities are indebted for their foundation and celebrity.*

The science in question requires demonstration; for in what manner can the fitness of animated nature to its situation and functions be judged of without some previous knowledge of that nature? Can a musical instrument, an organ, for instance, be constructed so as to produce its effects unless the principals of its mechanism be thoroughly known?—the organs of animated beings are nothing more than the instruments adapted to their situations and functions, subjects not to be understood without the knowledge of *structure*.—Such knowledge Mr. Este respectfully believes may be easily and safely communicated by the aid of drawings properly introduced and executed, so as neither to give offence to any audience, however scrupulous, *nor to trespass on the province of the teachers of any practical arts.* Having communicated what he believes necessary to assist the managers in forming their judgment, Mr. Este trusts he may be permitted to renew his request that they will have the goodness in their deliberations, to compare the whole nature and bearings of his statements, with the objects they have in view; and to consider whether these subjects are of sufficient importance to deserve their encouragement and support, so as to induce them to assist him in “*permanently*” establishing this department of science in the Royal Institution; as he respectfully conceives, *that unless his plans are adopted with a view to their being rendered permanent, neither the Institution nor himself can derive any benefit or advantage from such an undertaking.* Much *time and study, and no inconsi-*

derable expense being necessary to do justice to the subject.

62, Great Mary-bone Street,

January 28, 1809.

“ *At a Meeting of the Managers of the Royal Institution of Great Britain, held at the House of the Institution, on the 30th day of January, 1809.*

“ Read a proposal of M. L. Este, Esq. as to a course of lectures at the Royal Institution.

“ *Resolved*, that Mr. Bernard be desired to engage Mr. Este to give six lectures on the comparative fitness of animated nature to its situation and functions, to commence as soon as may be convenient, and to be in the nature of a *general prospectus* on the subject, avoiding as much as may be any technical references to physiology or anatomy.”

Extract from the minutes.

WILLIAM SAVAGE, *Assistant Secretary.*

“ *At a Meeting of the Managers of the Royal Institution of Great Britain, held on the 6th of February, 1809.*

“ Mr. Bernard reported that, in consequence of the resolution of the managers, he had engaged M. L. Este, Esq. to read a course of six lectures at two o'clock, on the comparative fitness of animated nature to its situation and functions, to commence from the middle of March, for a compliment of thirty guineas.”

“ Resolved that it be approved.”

Extract from the minutes.

WILLIAM SAVAGE, *Assistant Secretary.*

After delivering his course of lectures, Mr. Este wrote the two following letters.

62, *Great Mary-bone Street,*
April 22nd, 1809.

Mr. Este presents his respectful compliments to Mr. *Bernard*, and hopes in fulfilling his engagements he has given satisfaction to the managers, as he finds from many testimonies of approbation that his lectures were well received by the subscribers.

Zealously as Mr. Este wishes the welfare of the establishment, and anxious as he is to promote its interest, he cannot be totally unmindful of his own; he therefore takes the liberty of earnestly requesting that Mr. *Bernard* will have the goodness to procure him an answer to the principal part of his proposals submitted to the board of managers so far back as January 28th; he then *renewed* his request,

“ That they would consider whether the subjects he proposed to them were of sufficient importance to deserve their encouragement and support, so as to induce them to assist him in permanently establishing this science in the Royal Institution; as *he then stated* that unless the plans were adopted with a view of being rendered “ PERMANENT,” neither the institution nor himself could derive any benefit from the undertaking, on account of the time, study, and expense, necessary to do justice to so important and interesting a subject.

To these proposals he has not yet been favoured with any reply, and is therefore compelled to solicit Mr. *Bernard*'s friendly assistance, as, if it is intended to adopt his plan, it is absolutely necessary he should be employed in immediate preparation.

Mr. Este respectfully begs leave to know when it will be convenient for him to wait upon the managers of the

Royal Institution for the settlement of his little account ; and he asks permission to state, as *he had originally been given to understand that his lectures, if favourably received, were to be continued*, that from such intimation and from their very favourable reception, in the full expectation of their continuance he has incurred an expense of more than 104 *guineas* in drawings and other preparations. As both the Russell and the Surry Institutions are at present adopting, with every prospect of success, Mr. Este's plan, though not in the extensive manner proposed in the introductory lectures at the Royal Institution, *he still trusts*, from this circumstance, as well as from the success he himself experienced, and from his conduct in fulfilling his engagements, which he flatters himself has been to the satisfaction of the managers, he may be permitted to hope, that the materials he has formed for the successive development and illustration of animal structure, may be employed with advantage to the establishment in the course of next winter.

Should the managers of the Royal Institution be of this opinion, Mr. Este will in every respect endeavour to meet their wishes, and will have sincere pleasure in preparing through the summer a course of such lectures and experiments, as he trusts he may venture to say shall prove, certainly *not less attractive*, than the short introductory course he lately finished, and which if not followed up by explanatory and demonstrative lectures will he fears rather disappoint than gratify the general expectation.

62, *Great Mary-bone Street,*

May 16, 1809.

Royal Institution, 22nd May, 1809.

SIR,

On presenting a receipt according to the form below at the bank of Messrs. Ransom, Morland and Co. Pall Mall, you will receive 30 guineas, agreeably to a resolution of the managers of the 9th January, 1809.

“ Received of the Royal Institution of Great Britain by payment of Scrope Bernard, Esq. treasurer, thirty-one pounds ten shillings for a course of lectures on animated nature, delivered in 1809.”

£31 10 0.

IN answer to the two last letters I received *an intimation* that the funds of the Institution did not permit the managers to extend their engagements; that they had declined four offers of lectures; but that if these lectures were to have been continued, notice was to have been sent me, as I understood, in the shape of a proposal from the Institution at the beginning of the present year 1810. I consequently felt surprised when I learnt from the advertisement for the year that the lectures on the *philosophy of the animal economy* were to be continued, and that Dr. Smith was appointed to deliver them. The causes of this arrangement I am not able to state: what my lectures were, those who did me the honour to attend them, may perhaps recollect; what my conduct towards the Institution has been in other respects, I think proper thus to disclose.

Before concluding, I shall take the liberty of making a few general remarks upon scientific institutions,* and of stating the reasons why certain learned establish-

* Some further observations upon this subject will hereafter be submitted to the public.

ments in Europe have enjoyed greater celebrity than others, and what, in my humble opinion, is necessary for their prosperity.

The *erudition, diligence, and ingenuity*, of their professors, the *attention and support* bestowed upon them by government, the extensive scale of their establishment, the PUBLICITY AND LIBERALITY OF THEIR PROCEEDINGS, and a concurrence of minor circumstances, have rendered several pre-eminently great. These establishments SHOULD BE "OPEN," not only to the talents of the particular country in which they prosper, but *should stand* as a centre of union for the talents of all countries, distributing their premiums to all with the impartiality of justice, and the discernment of truth; *should* thereby assuage in some degree the animosities which the artificial divisions of mankind into separate states and societies have produced: the mere distinctive names of which are alone sources of hatred and dissension, and *should* thereby UNITE ONE CLASS OF MEN, *who perhaps never ought under any circumstances to be otherwise than united!*

In London, we have the *Royal, London, Surry, and Russell* Institutions, and several others are either already established, or in their growth; as the *Athenæum*, at Liverpool; *Stonyhurst*, in Lancashire, &c.: they all have met with that support naturally to be expected in a nation so enlightened and refined as the British. A tribute of respect is due to the public spirit and munificence of our countrymen, thus liberally bestowed upon the encouragement of learning. The list of subscribers to the Royal Institution fills a thick octavo volume, and *the amount of sums that have been subscribed to it is very considerable*. The subscription to the London Institution filled in a few hours, and lectures were delivered last year both at the Surry and Russell rooms.

All these establishments are nevertheless upon a com-

paratively contracted scale. For their *proper management* the attention of the proprietors and subscribers should extend to something beyond the newspaper-room. They have an important duty to perform; each should take an interest in preserving *them OPEN in all their proceedings*, as from neglect in this particular many abuses *may* arise; for instance, *the entire direction and controul of a great establishment "MAY" fall into the hands of two or three individuals*. It then *may* prove matter of serious inconvenience to any man of a profession to take the least step under their advice and assistance: their opinion *may* be to him not the best rule of conduct, on account both of their power and their uncertainty: for if he should happen to gratify them in their humour one day, that very gratification *may become* the ground of their dissatisfaction on the next. The proprietors and subscribers, ceasing then to be patrons of science, *may* be rendered *innocently enough, supporters of a monopoly!* From such neglect various other abuses *MAY* arise, as, for instance, exhaustion of the funds; when a plea of poverty *may* serve both as a perpetual bar to the admission of talent, and *as a specious reason for supporting exclusively in office two or three persons who MAY thrive upon the very embarrassments of the establishment!* which cannot well happen when their proceedings are *public!* Besides, according to an old law maxim, where *mystery begins, justice ends*. Impediments *may be* thrown in the paths of science: power concentrated *may be* "*privately*" exercised to the injury of many deserving men; *may* imperceptibly influence public opinion; *may* in fact be employed *in the suppression, not the promotion* of merit.

The votaries of science have long laboured for the benefit of mankind, without any adequate reward; *it should be* the business of these institutions *to attend to and meet their reasonable complaints*. Patronage should *descend impartially* to their assistance and protection;

should, with dignity, but without reserve, “ be accessible to ALL, whom the sciences may lead into her presence. That such establishments may be adorned with whatever can delight the eye, elevate the imagination, or enlarge the understanding, their gates should stand-always open; INVITING to entrance, all whom the sciences number in their train. But unless they are so, the precepts of truth and justice will be trampled upon by the creatures of flattery and caprice; no attention will be paid but to ceremonies and formalities, in institutions which should be of the most easy and speedy access.

The establishments for the promotion of learning in Europe have *generally* the following classes. Physical and Mathematical sciences; Literature; History; the Fine Arts; Geometry; Mechanics; Astronomy; Geography; General Philosophy; Chemistry; Mineralogy; Botany; Rural Economy; the Veterinary Art; Anatomy; Physiology; Zoology; Painting; Sculpture; Architecture; Engineering; Engraving; Musical Composition, &c. &c.

At the Royal Institution of Great Britain ONE department of science is particularly attended to, viz. the *Electro-chemical*. Mr. DAVY, in whose praise too much cannot be said, and whose talents are not to be estimated by any price that can be put upon them, has the principal, indeed the ONLY, settled professorship of the Institution. He *alone* resides at it, and *alone* holds permanent appointments under it. A few other gentlemen of distinguished merit are occasionally either “ PERMITTED” or engaged to deliver lectures there, as appears by the preceding lists.

M. L. ESTE.

While these Lectures were delivering, notwithstanding the extensive patronage, and the very great number of attendants, at the Royal Institution, such were the em-

barrassments that the Directors could scarcely keep it open; a Sale of the Library and effects had been proposed and considered. The Institution must have closed but for the spirited conduct and munificence of some of its illustrious patrons. One nobleman advanced a thousand guineas; other contributions followed, and plans were formed for recruiting the finances. These plans were made the subject of a Lecture, and likewise of a pamphlet by Sir Humphry Davy. Vide "*Plan proposed for improving the Royal Institution, March 3rd, 1810.*"

Mr. Este's Proposals, Lectures, Remarks upon the Management of Scientific Institutions, were published in 1808, 1809, 1810; Sir Humphry Davy's pamphlet did not appear until *March 3rd, 1810.*

In the autumn of 1812, an intimation was made to Mr. Este, with a view of inducing him to re-submit his proposals and to resume his Lectures, viz. that the finances of the Institution were improved; that under such altered circumstances, he would meet with that support from the managers, which their former difficulties had precluded them from affording; that several of the Lectures, subsequent to his own had been delivered gratuitously.

The intimation came too late: during the summer of 1812, Mr. Este had been invited by the late Earl of Harrington to take the medical charge of his regiment, the 1st Life Guards, then under orders for foreign service; together with the direction of the medical concerns of the Royal Brigade of Household Cavalry, in Portugal, Spain, and in France. He had just received his commission from the Prince Regent, had kissed hands on his appointment, and therefore could not do otherwise than give a negative answer to the intimation. Under other circumstances he would gladly have attended to it, especially as it was made in a very flattering manner, and by a person distinguished almost as much for his talent and attainment, as for his benevolence.