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MENTAL DYNAMICS

OR GROUNDWORK OF A PROFESSIONAL EDUCATION

—— Quidni ego magnorum virorum et imagines habeam, incitamenta animi, et natales celebrem? Quidni illos honoris causa semper appellem? Quam venerationem præceptoribus meis debeo, eandem illis præceptoribus generis humani, a quibus tanti boni initia fluxerunt. SENECA.

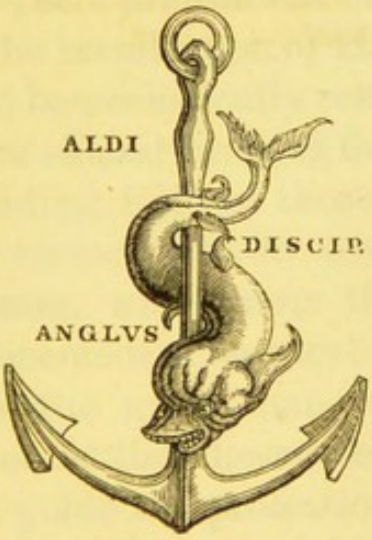
MENTAL DYNAMICS

OR GROUNDWORK OF A PROFESSIONAL EDUCATION

THE HUNTERIAN ORATION BEFORE THE ROYAL COLLEGE OF SURGEONS OF ENGLAND 15TH FEBRUARY 1847

BY JOSEPH HENRY GREEN F.R.S.

LATE PROFESSOR OF ANATOMY AND SURGERY TO THE COLLEGE: PROFESSOR OF ANATOMY TO THE ROYAL ACADEMY: ONE OF THE SURGEONS TO ST. THOMAS'S HOSPITAL



LONDON
WILLIAM PICKERING
1847

HUNTERIAN ORATION.

Mr. President and Gentlemen,

AS some pious wayfarer, who casts a stone on the cairn or heap, which serves as monument or memorial, I now appear before you to add my humble contribution to the pile, which raised by successive Orators is intended to mark our sense of the distinguished services of John Hunter.

But the Founders of this oration doubtless proposed by their munificent endowment, not merely that the recollection of Hunter's exalted merits should be periodically renewed, but that his excellence should be held forth as the pattern and guiding light of those who aspire to professional eminence;—in conjunction with kindred themes, which note the progress, or aid the advancement of surgical science. And if we regard the great man, whom we now meet to honor, as the chosen leader, who is to animate and guide the professional aspirant in forming the scientific character, which ever ought to be his aim, it can be no matter of complaint that the example, which is to be his beacon and goal, is deficient in brightness and elevation. Assuredly never were honors more

justly claimed than by this physiologist and surgeon! We may date from his original views the rise of scientific surgery. But, invaluable as his researches were, and most happy as their effects have been, in the increased light, power and courage of surgery, may we not rather say, that he performed the more important service of bringing the whole art of healing into close alliance with the sciences, which have nature for their object, by exhibiting its requisite foundation on an enlightened Physiology?

In the magnificent assemblage of facts, which constitute the invaluable Museum deposited within these walls, and in the correspondent preparations for decyphering them as the significant symbols of animated nature, we possess not merely an orderly arrangement of the forms of organic life but the foundations of a science. The results of Hunter's laborious investigations are here brought together in the unity of a scientific Idea, and linked together as a chain of inter-dependent truths, of which the staple and primary principle is the great law of life. It was Hunter's peculiar merit to have first presented the facts of comparative anatomy in and as a connected scheme of graduated development, the connection supplied, and the aim anticipated, in the antecedent unity of the causative law of life:—it was Hunter's peculiar merit to have first fixed the principles of physiology, by banishing hypo-

theses, fictions, and arbitrary assumptions, and by considering life as a Law ;—implying that it is a power anterior, in the order of thought, to organization, which yet it animates, sustains, and repairs—a power originative and constructive of organization, in which it continues to manifest itself in all the forms and functions of living being. He has thus furnished the grounds of a new science, the science of Comparative or Universal Physiology ; and with it the well founded, and not unconfirmed, hope of making every part of the organized creation give intelligibility to every other part, and all to the crown and consummation of all, the Human Frame.

My present purpose, however, is not that of dwelling on Hunter's merit as a physiologist and surgeon ; but of considering how far his excellence may be deemed a pattern for the formation of a scientific character in unison with the requirements of our profession. We are here indeed, on the very threshold of our enquiry, met by a difficulty, which can neither be overlooked nor disregarded ; it is this, that the predominant and characteristic trait of Hunter's mind was Genius. Now if, in accordance with almost universal belief, we admit without qualification that this attribute implies a perfection unattainable by human effort—that it is absolutely a special gift of Providence imparting to the mind of its pos-

sessor somewhat of the power originative and creative of the Divine Giver—we must humbly confess that Genius is not an imitable acquirement, and we shall be constrained to abandon as hopeless any search for the means of emulating Hunter's peculiar excellence by mental culture and self-exertion. Nevertheless, who will deny, that by educing and cultivating the powers, which any fairly endowed individual may possess, we may preserve the freshness, improve the vigour, and favor the originative faculties of the mind? And if, as cannot be doubted, the art and science of healing eminently require a mind relying on its own resources, it cannot be unworthy of our study how the mind may be best trained in order to elicit its inherent powers and native energies, and to render that calculable and regular, which otherwise would be but a happy accident.

On the other hand, were the inventive faculties of inborn Genius not sustained and reinforced by facilities acquired by habitual exercise, by laborious trains of thought, and by the accumulated lessons of experience, we should find original power elanguesce, and exhaust itself in immature and abortive productions:

———"alterius sic
Altera poscit opem res, et conjurat amice."—HORACE.

And this view is not a little strengthened by the history of those favored individuals, who lay the highest claim to original and creative

thought. The unceasing application and marvellous industry of Hunter himself have been too often urged from this place to need additional praise or comment. And if our immortal Milton, in the full maturity of his genius,

——"fed on thoughts that voluntary move
Harmonious numbers,"—

he had acquired this power, he had earned this facility, this spontaneous activity, by the industry with which in early life he had accustomed himself

——"to build the lofty rhyme."

The processes of thought, which in the mind of an ordinary man form his distinct consciousness, and move separately and slowly before him, have by fusion and acceleration passed into the intellectual life of the man of genius in the moment of productive action. But, mighty as the collected stream, still it is the rills and rivulets of reflection, by which the mass of waters is fed;—the raindrops of the overhanging tree are not neglected, and the snows, which it melts and unites with itself, add both to the depth and the current.

Instead then of treating Genius as a mysterious endowment and occult faculty, I would say that it far rather designates the healthy balance and proportionate development of all the powers and faculties, that are essentially human, and their harmonious constitution to

One.* Hence a more correct and significant expression for what we mean by Genius, would be Individuality; since hereby we understand that union of Free Will and Reason, by which man consciously affirms his Personality, and therein continuously asserts his sphere of thought and act:—and it would be at least difficult to discover a more appropriate meaning for genius than the achievement of this individuality according to the idea, or the approximation to its excellence, which consists in a higher potentiation and happier combination of the human powers, intelligent and active, by the animating, modifying and intensive energy of the sole font of original power within us, which we name free or moral Will. Various, indeed, may be the forms, which reveal the essential idea of our common Humanity, various the causes of degeneracy, which render its growth imperfect or abortive, various the forms of mental excellence and of moral dignity, to which it gives birth: but still it is the living and persistent energy of the moral Will, which gives the impress of character and of genial power to a Luther, a Dante, and a Milton, and stamps an indelible unity on their aspirations and acts, their works and their aims. I need scarcely remind you that I am not speaking here of the predominance of moral Will, in its proper character and highest func-

* See Appendix A.

tions, as guiding and determining human conduct in relation to the Conscience;—though I must ever believe that Genius in its undoubted and paramount dignity is always associated with moral worth,—as has been well expressed in the noble saying of Strabo, as applied eminently to the poet: Ἡ δὲ (ἀρετὴ) ποιητοῦ συνέζευκται τῇ τοῦ ἀνθρώπου· καὶ οὐχ οἷόν τε ἀγαθὸν γενέσθαι ποιητὴν, μὴ πρότερον γενηθέντα ἄνδρα ἀγαθόν.*

Hence then—if the individuality of man be universally in its end and aim the harmonious development and union of those constituent powers, moral and intellectual, which are the birthright of our humanity—we may now, with better hope of a successful solution, revert to the problem, which we have proposed, of educing the excellence, in which Genius, or the ideal individuality of man consists. This is the goal, or ideal point, to which, however distant its actual attainment may be, it must ever remain our object to approach, as near as we can: and I anticipate no objection when I state that the process, for attaining or approximating to this great moral result, constitutes, in its scope and end,—a Liberal Education. And in the following attempt to define the intellectual discipline, which may best prepare the mind for the scientific cultivation of a profession, and aid the individual in forming his

* Geograph. Lib. I. cap. ii. See Coleridge's Table Talk, v. ii. p. 245.

character in the light of a final aim,—my motive will be explained, and a sufficient apology for deviating from the ordinary topics of this address will, I trust, be found in the fact, that the Charter, recently granted to this College, provides for the institution and maintenance of a Class of Fellows, who, in addition to higher professional qualifications, are required to have them grounded on a liberal preliminary education.

In carrying out this important provision of the Charter the Council, with due regard to the national trust confided to the Royal College of Surgeons of England, and to the permanent interests of the department of the profession, over which they preside, have adopted as their standard of attainments that of our time-honored Universities, and have determined that the preliminary education of the candidate for the Fellowship shall be guaranteed by a Degree, or shall be equivalent to that of a Graduate, in Arts. I cannot doubt then that you will agree with me in thinking that our time this day will not be mis-spent, in considering whether the aim of the Council to elevate the character of the surgical profession is likely to be realized, by thus offering inducements for enlarging the foundation, upon which the superstructure of surgical education is to be built, and for assimilating the preliminary education of Surgeons to that of the other Professions and of the Gentry of the country.

I am free to confess however that I should scarcely have ventured on the difficult task of pourtraying the leading requisites and final intention of a liberal education,—under a deep sense both of responsibility and of duty—were I not cheered by the example, and aided by the lessons of my revered teacher, and lamented friend, Samuel Taylor Coleridge.* His name as a Poet is endeared to all who have derived from him "the habit of wishing to discover the Good and the Beautiful in all that meets and surrounds us" †: and in estimating his influence as a philosopher, a moralist, and a Christian, I may say with an affectionate disciple on the other side of the Atlantic, "to posterity may be safely entrusted those productive ideas, the possession of which will be for their benefit, and connected with which, in the language of the son of Sirach:—*His own*

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* In addition to the quotations from his published works, I refer here especially to views, which I have advocated, and to particular passages exhibiting them, which will be found in the parts relating to grammar, mathematics and logic, and have been derived more or less from an unpublished and unfinished work on Logic by S. T. C. The reader is likewise requested to attend to the distinction between Reason and Understanding, so fully and ably established by Coleridge. See Aids to Reflection, Fifth edition, vol. i. p. 162.—"Neque enim ex alienis spoliis nominis nostri munimenta exædificare in animo unquam habuimus: sed aliorum bonam famam laborum potius nostrorum accessione capere incrementum."—SCALIGER.

† Coleridge. Preface to Poems.

memorial shall not depart away, and his name shall live from generation to generation."*

In the commencement of Systematic Education, and in every stage of its progress, let it never be forgotten, as a rule which deserves to be written in letters of gold, that "as the forms in all organic existence, so must all true and living knowledge proceed from within;—that it may be trained, supported, fed, excited, but can never be infused or impressed."† But if this principle is to be effectually carried out, the primary object of the teacher will be that of calling forth the intellectual faculties from their dormant state; and of disciplining the mind to those habits of conscious reflection, by which it gains the knowledge and obtains the mastery of its own powers, apart from the particular and contingent subject matters, on which they are exerted. Hence those elementary factors of thought, which we name Abstraction and Generalization are first to be educed and exercised;—indispensable aids, by noting the different in the like, and the like in the different, to the naming, sorting, and classing of all the materials, of which sensible and conscious experience is composed.‡ And in

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* Preliminary Essay by the Rev. James Marsh, reprinted in the second volume of the fifth edition of Aids to Reflection. It cannot be too highly commended as an introduction to the study of Coleridge's writings.

† Coleridge. The Friend, vol. iii. p. 183. Third edition.

‡ Abstraction designates the process, by which, in con-

early childhood the rudiments of these processes may be traced in the law, which first discloses itself, of the Association of different objects by perception of Likeness;—a process that will be found to involve the exercise of an abstracting power. But as Words are themselves the earliest products of this power, so do they naturally become the first subject-matter, by which it is cultivated, and consequently the commencement of human education.

On the first instrument of systematic instruction, namely the Alphabet, it is unnecessary to dwell—though its invention may be regarded as the chief primary epoch of the civilization of any portion of mankind speaking the same language, and itself as the *nucleus* of all mental culture. It is however in the Accidence that we learn the strength and temper of the implements with which Language provides us; for it may be shown that the Parts of Speech, into which language is divided, together with the significant syllables, which form their inflexions, do really correspond to, and represent, acts, by which the logical faculty carries on its processes; and that the Accidence, as a part

templating any object, our thoughts are directed to some one part or property exclusively, withdrawing our attention from the rest. Generalization indicates the process, by which the mind occupies itself with like parts or properties in dissimilar objects, and in consequence of the likeness includes them in one *genus* or kind.

of Grammar, teaches the first lessons of Thinking, in aid of conscious reflection.

One illustration must suffice. In all the languages of civilized man there will be found:—the Noun or Substantive, implying a person or thing, having a supposed ground of independent existence in itself; the Verb, denoting action or passion; and the Verb substantive, as the identity or co-inherence of act and being.* In philosophical grammar the verb substantive is the first or parent word, and expresses that act in and by which the individual affirms, and in affirming knows, himself to be a Person, "I am." In the nonage of individuality the child speaks of himself in the third person;—and how few ever reach that epoch, at which the man consciously affirms, that is, realises by a continuous act, his completed individuality as a moral being!

It may be admitted then that in the Accidentia of language, the scholar will have become acquainted with the means of securing and recording the relations of thought which the mind supplies. But more than this;—he will have been prepared for seeking in his own mind the life and essence of knowledge:—for as in affirming his Personality, by the verb substantive "I am," man asserts, nay, acquires the knowledge of his own substance, as spiritual being, and thereby knows what Sub-

* Table Talk, vol. i. p. 62.

stance truly and properly is,*—so he contemplates the outward, persons or things, as subjects partaking of reality by virtue of the same substance, of which he is conscious in his own person,—and meanwhile under the sense of power, which arises simultaneously out of the depth of his inward being, he invests nature with life, action, causality, spontaneity. Words then are not mere signs, or articulate sounds; —they are Living Powers by which the mind for its own purposes, imparts to the outward meaning and intelligibility, and raises the transient imagery of nature into its own significance and essence.†

Such is the first or grammatical part of education. Its proper object is that of educing the intellect in order to the future attainment of some specific knowledge; while by the grammatical exercises, which it implies, the pupil will have become initiated in the art of arranging Words and Sentences perspicuously. And I may add that it would be difficult to attach too much importance to a knowledge of Words, their definite import and right use, as grounded in Grammar, and evinced by a correct Style.

But I do not permit myself to forget the principle, from which we set out, of the harmonious development of all the faculties properly human;—and the discipline in question

* See Appendix B.

† See Preface to Aids to Reflection.

leads without effort to the acquirement of many and miscellaneous knowledges, that felicitously blend with the main purpose of the Teacher.

Thus, as admirably suited to engage and exercise all the faculties, which may be supposed to be predominant, active, or capable of further evolution at an early period of mental training—we may mention Natural History, considered here without especial reference to its scientific character:—a study, which offers food for every digestion, knowledge for every capacity, and which tends more perhaps than any other to people, to enlarge, and to tranquillize the mind. But where begin, or where end, in the vast living panorama of God's works, in which earth, air, sky and ocean, teeming with the multitudinous assemblage of their countless myriads of products and inhabitants, form the mighty canvass, and rise upon the overwhelmed sense of the youthful student, as they may have burst upon the view of our first progenitor, and still as fresh as in the morning of creation? The "majestical roof of heaven fretted with golden fire;"—ocean and the watery world, as the workshop where the busy artist Nature prepares the first rude sketches of the living forms, which she afterwards brings to view in a higher and more perfected character;—mid-air, with its shifting scenery of light and clouds, its meteors and changeful variety of atmospheric phœnomena;—and earth, with its hidden treasures of metal,

chrystal, and precious gem; its surface, diversified by river, lake and mountain, adorned with all the forms of living growth from the lofty forest tree to the lowly and lovely flower, and peopled by the animated tribes, that form the graduated scale of organic life. Here Curiosity is ever excited, Attention rivetted, and Memory bribed, by perpetual novelty, variety and beauty;—the Comparing power is ever kept alive by an endless succession of similitudes and contrasts, that now sustain the interest by inducing the pupil to note the like in the different and the different in the like, and now re-awaken the flagging attention by renewed excitement and gratification of the senses;—and the Reasoning Power is finally evoked in order to trace and explain the varying adaptation of means to proximate ends, displayed in Instincts which anticipatively rehearse the functions of that faculty, which when enlightened by Reason, and directed to ultimate ends, becomes Human Understanding. Thus, as the student watches the ascension of nature into mind, he shall learn that, up the whole ascent, nature is a prophetic-hymn, heralding the advent of man, and proclaiming the wisdom and goodness of the Creator.

Again, natural history is nearly conjoined with the history of Man by a knowledge of the Earth as his destined abode,—of its past changes and epochs, registered in the rude

but instructive chronology, which it is the province of Geology to explain and verify,—and of the varied circumstances of temperature and climate, of the distribution of land and water, of the course of rivers and position of inland seas, of the grand features of mountain, hollow and plain, and of the products, organic and inorganic of different regions—which have influenced the peopling of the earth, the settlements and migrations of tribes, the character and occupations of nations. Let the pupil however never be allowed to forget—in surveying the stage, with its scenic accompaniments, on which man plays his appointed part,—that if, as cannot but be admitted, the state of nature for every creature is that, the circumstances of which most facilitate and least impede its full development, then the natural state of man exists only in the Idea. Not what he is, but what it is intended he should become, is his natural state. It must be produced by himself:—qualified indeed by the position, that a certain vantage ground must have been given; and this vantage ground, necessary for human development, is derived, the first progenitor of man excepted, from individuals of the same kind. For the first individual, the presumptive source of our species, this most favorable state of nature was provided for him by a Being transcendently above nature: but it is universally supposed to have been brief and transitory, as if to teach man at the very

outset, that for man what is not won by himself will be lost, were it only that it may be regained by his own efforts.

Next, in immediate relation to the physical history of our globe, follows the History of Man—his primæval state, the separation of Races, the gathering and swarming of hordes, the settlement of nations, and the formation of political confederacies and states—History, exhibited as the great scheme of Providence, which has been, and ever is, operative in the moral education of man, considered as the mind and soul of the planet.

Out of the mists and clouds of mythological fables and poetic myths, which float round the well-head of mundane time, the narrow stream of history issues from the inaccessible heights of antiquity, tracked at first only by a gleam of the light of revelation, until, gathering in its course, and swelled by the confluence of many tributary waters—story, song, legend, or tradition—it reaches the plains of historic truth and flows onward as a majestic river, securely embanked by written documents and recorded facts. But the possibility of being brought into living connexion with the primordial germs and the early genius of our humanity—the possibility of the transmission from age to age of accumulating knowledge, nay, of the very conditions of progress—is Language; and, as interlocutory and written, it is at once the key, by which we unlock the wisdom of the past,

and the instrument by which man preserves the unity of his country and of his kind.

Distant from the ideal of their humanity as every known country, or aggregate of men, is acknowledged to be, we nevertheless see one momentous difference:—a certain number of nations, or people of the earth, retain the conditions of Progress, while the remaining parts of the species bear the decisive stamp of their inferiority, their Improgressiveness;—communities, whose to-day is an everlasting yesterday, or varied only by the accidents of the day, more or fewer calamities, less or greater wretchedness. The proximate cause of this awful fact is evidently this.—The nations that are historic and progressive, contain in themselves the means and instrument by which their progress may be effectuated, namely, Literature;—Literature as connecting one nation with others diversely though equally cultivated, and as connecting the present with the past and with the future. They possess that which gives a continuity to time, and emancipates both individuals and communities from the hard necessity of existing as successive fragments,—like a glow-worm in the scanty circle of its own light, all before and all behind and, save in the narrowest vicinity, all around—in impenetrable darkness. But Literature, thus regarded in its high vocation of representing the total mind of a nation or people, no nation can have without a living intercommunion with the master minds

of all ages and countries. Need I say that this communion, this intelligible converse, whether we speak of the nation collectively, or of the individuals of which it is composed, can only be the result of a familiarity with the Language, which is the medium of communication, and with the words, which are the living educts wherein the productive thoughts are embodied? Any additional language, of which a man is master, is as it were a new limb without its deformity. And I scarcely need dilate on the importance of that which enables a man to collect into his own individuality the discoveries, the mental wealth, the ennobling affections, and the models of the wise and great of countries and states under the most auspicious circumstances; or on the moral utility of an instrument, which may enable him to confer a portion of his knowledge and power on the inhabitants of less fortunate countries.

But the demand on the time and attention of the student of the *Literæ humaniores*—of the knowledges, which belong to man universally —is scarcely less than imperative, if we look to the indispensable services of the languages of antiquity generally, and of classical literature especially, in explaining the process, by which the present stage of intellectual culture and of actual knowledge has been attained; and, it may be added, in arming the mind for future enterprise and farther conquests. How shall we correctly interpret the Oracles of God with-

out a critical study of the languages, in which they were recorded,—written, as they were, for our instruction in that which concerns every man, who is not wanting to himself: and how understand their promulgation without an acquaintance with the character, national and religious of the Hebrew people, with the peculiarities of Judaism, and with the influence produced at Alexandria by the interfusion of Greek and Oriental philosophy? How shall we learn political science, unless we read the Historians of antiquity, sacred and profane, examine the polity of ancient Commonwealths, and study with diligence the laws and institutions of legislative Rome? What reliable knowledge of Philosophy, and of speculative science, without invoking the genius of Plato and Aristotle, who still take their place on the eminence, on which Raffaelle in his School of Athens has visibly presented them, and who yet remain the monarchs and legislators of the *mundus intelligibilis*, of the intelligible and supersensuous world? What hope of Æsthetic principles and of a cultivated Taste, without a familiarity with the excellences of the models of ancient Greece, with a view to their fruitful comparison with the master-works of modern genius, and to the recognition of the distinctive character of each? For, if the ancients may justly claim the praise of having invested the Finite in all the charms of Beauty, now elevated by grandeur, and now dignified by majesty;—

to the moderns belongs the superiority—and it holds equally good of the Fine Arts as of Poetry and the Drama, and is the distinguishing character of the genius of Christendom, alike in Michael Angelo as in our own Shakespeare—to the moderns belongs, I say, the superiority of the Expression of the Infinite, say rather, of suggesting what in the world of the senses can have no adequate representative, of producing a felt activity of all our highest powers, with the consciousness that we are soaring towards an Unapproachable, but find in the soaring itself a sufficing reward.

My auditors will not, I trust, think me so wanting in judgment as to suppose that the course of study, the outline of which I have endeavoured to trace, will be equally applicable to all, in all its parts, or will require in all the same measure of proficiency;—or that in any instance its completion could be accomplished in the period of early youth. It is only for the sake of a more comprehensive survey of the advantages of literature, without especial reference to the age or future prospects of the individual, that I have ventured to expatiate upon this interesting theme;—and enough, I will fain hope, has been done, to show the importance of a grammatical foundation in any education which claims to be "liberal," and no less of an initiation into the languages, which are the key of those knowledges, that appertain to our common humanity.

Or, if I need any advocate, in recommending the study of Letters, let it be Cicero in a passage, which though familiar can scarcely be too often quoted: "*si ex his studiis delectatio sola peteretur: tamen, ut opinor, hanc animi adversionem humanissimam ac liberalissimam judicaretis. Nam ceteræ neque temporum sunt, neque ætatum omnium, neque locorum; hæc studia adolescentiam alunt, senectutem oblectant, secundas res ornant, adversis perfugium ac solatium præbent, delectant domi, non impediunt foris, pernoctant nobiscum, peregrinantur, rusticantur.*"—CICERO.

Let me however recall your attention to the earlier part of systematic education from which we started, but which has incidentally brought to our notice studies, the successful prosecution of which reaches far beyond the period here in question. We may be indeed permitted to assume that the knowledges obtained, as is the case in our great public schools, will be considerable in quantity, variety and value—and whatever is valuable as matter of knowledge, and for its own sake,—*hoc omne lucro ponamus;*—but the proper aim is that of educating the intellect in order to the future attainment of whatever practical and specific knowledge the intended sphere or profession of the individual may require, and the principal object is the exercise of the understanding in its analytic and synthetic functions, on which all sound

judgment depends. These functions, as we have seen, have been called forth in the grammatical studies of the pupil; but henceforth they must appear in their proper character and be wielded with conscious ability.

It has been received almost as an axiom on the authority of Locke, though probably founded on a misconception of the meaning of Bacon, that Mathematics may be a substitute for Logic: but the position will be found unsupported, if we consider the different purposes of these two great factors of the human intellect.

The first, or the science of Mathematics,—as unfolding the necessary relations of all the forms of sensible experience to Space, Time and Number—is one the great value and comprehensive utility of which are so obvious, that it is universally admitted to be not only essential to a liberal education, but more or less an indispensable element of the preparation required for all the ordinary concerns of life.

In the application of mathematical science to nature, as the sphere of our sensible experience, "we have a most assured knowledge, which, vast even to astonishment in its present extent, promises to enlarge itself without limit in the future—a science, of which it may with severest truth be said, that it

"Hath made earth's reasoning animal her Lord,"

hath enabled man to behold the ends of the earth, and to survey what is beneath the heavens. He measureth the sea, and appointeth laws to the flowing thereof: he unravelleth the maze of the moon: he foretelleth the course of the stars—yea, he weigheth them out, and doth compass them as with a line."* And this too by a science in the pure and most perfect sense, which carries with it throughout demonstrative certainty, an absolute necessity of truth. The science of mathematics rests therefore on no grounds of experience, which could at best only give us the knowledge that It is so, not the clear insight and irresistible sense that So it must be.† Consequently it can be only a pure product of the intellect acting by its own powers on its own wealth;—it is the work, indeed, of the Reason, acting on the Pure Sense; for where except in the Reason can necessity and universality be found?

Were the value of mathematical knowledge comprised, however, in the splendid achievements, which the sciences of figure and number have wrought, in bringing the natural world under the power, intellectual and manual, of man,—it would still want the inducement to its study, which its important aid in intellectual training and discipline supplies. Well hath Plato said: οὐδεὶς εἰσίτω ἀγεωμέτρητος, "Let

* Coleridge. Compare Aids to Reflection. Fifth edition, p. 175.

† See Appendix C.

no man enter the schools of philosophy, who has not previously disciplined his mind by Geometry. He considered this science as the first purification of the soul by abstracting the attention from the accidents of the senses;"* and a poet of our own age has told us:

"Such is the throne, which man for Truth, amid
The paths of mutability, hath built,—
Secure, unshaken still; and whence he views,
In matter's mouldering structures, the pure forms
Of circle or triangle, cube or cone—
Impassive all; whose attributes nor Force,
Nor Fate, can alter. There he first conceives
True being, and the intellectual world,—
The same this hour and ever. Thence he deems
Of his own lot:—above the painted shapes,
That fleeting move o'er this terrestrial scene,
Looks up;—beyond the adamantine gates
Of death expatiates;—as his birthright claims
Inheritance of all the works of God;—
Prepares for endless time his plan of life,
And counts the Universe itself his home."—

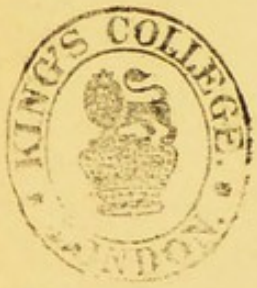
AKENSIDE.

Dry and even repulsive as the very name of Logic may sound in an age, in which the immediately useful, in the knowledges that relate to material objects and interests, is predominantly and almost exclusively regarded, it may yet be well to pause—in considering whether the science possesses no other claim to our attention than its admitted abuse by the Schoolmen. You need be under no appre-

* Coleridge. Second Lay Sermon, p. 364. Second edition.

hension however that I am about to undertake the difficult, and perhaps distasteful, task of solving the intricacies or of explaining the subtleties of Logic. But if, as may be truly affirmed, the results of experience would want the combinations of thought and the stamp of truth, were they not submitted to a process of Reasoning—then a competent acquaintance with the rules and methods of conclusive discourse cannot be deemed a matter of indifference to any one desirous of securing the privileges of a rational being.

Without the all-important functions of Abstraction and Generalization, implying Comparison and Judgment, and their results expressed in Terms and Propositions,—the impressions on the senses, the influences that continually excite our notice, the appearances around and about us would be but a diffluent chaos;—they could not be substantiated as facts, retained as experience, reasoned upon as truths, or made the means of foresight and of extended knowledge. The proper province of Logic, however, is Reasoning or Discourse—the process by which we deduce from known truths all that they legitimately comprehend, by which we apply general rules to particular cases, by which we infer from some less comprehensive truth one of more comprehensive generality;—it is the process by which we weigh evidence, infer and prove by argument, and draw universal and necessary conclusions;



—while in every judgment the presence of Reason is attested by the claim, which it asserts and vindicates to the unavoidable conviction of all rational beings. And the results are the Rules, Maxims and Judgments, which constitute our generalized Experience.

It is not therefore the art of one

> "Profoundly skill'd in analytic;
> Who can distinguish and divide
> A hair 'twixt south and south-west side;
> On either which who can dispute,
> Confute, change hands, and still confute:"—
>
> BUTLER.

Reasoning is the daily and hourly business of our lives, and, whatever our worldly calling —in the pulpit, at the bar, or at the bedside of the patient—we are unceasingly occupied in inferring or proving a something from what is already ascertained or taken for granted. And in the words of an eminent writer on Logic, "To learn to do that well, which every one will and must do, whether well or ill, may surely be considered as an essential part of a liberal education."*

Nor should we forget, in obtaining the mastery of the art of discoursing conclusively, the various causes, which interfere with sound reasoning, and against which we must be perpetually on our guard, as tending to vitiate our

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* Whately's Logic. Preface.

earnest endeavors to arrive at truth, or as laying us open to the insidious arts of the Sophist, not always harmlessly directed

> "To weave fine cob-webs for the skull
> That's empty when the moon is full:"—
>
> BUTLER.

We should especially accustom ourselves to think and reason in precise and steadfast terms. "By familiarizing the mind to equivocal expressions, that is, such as may be taken in two or more meanings, we introduce confusion of thought, and furnish the sophist with his best and handiest tools."* It is not my purpose to enter into an account of the fallacies, by which the human mind imposes on itself and others; but the bare mention of them suggests, as their corrective, in addition to its other manifold services, the study of Psychology, or as it is often called Mental Philosophy.

"If however we rightly take advantage of the principles of Logic, taken largely as the criterion of truth, in relation to the forms and laws of the thinking faculty, though it cannot supply a touchstone of error, when such lies in the matter of thought, yet it will confer on us the inestimable power of abstracting from all empirical sources of error,—from the influence of the senses, from the interference of the imagination, from the disturbances of passion, and

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* Coleridge.

inclusively of human prejudices general and individual,—and preserve us from the counterfeits of knowledge, which proceed from them."*

GENTLEMEN,

You have now reached a vantage ground, from which you may profitably review the brief exposition—to which my narrow limits confine me—of the foregoing requisites of a liberal education. But in this survey, I cannot doubt that the student, who is earnest in the pursuit of truth for its own sake, will discover that, amid all the means of self-knowledge, which I have proposed, no place has yet been assigned for Truths, that have an especial relation to the moral and spiritual being.—Nevertheless, by diligent meditation on the facts of his consciousness, he will not fail to find Truths which have their birth, growth, and requisite foundation in the whole man, head and heart, and without the possession of which he will live in the eclipse of the better half of his being, intellectual and moral. Truths, which it is the business of Philosophy to bring into distinct consciousness; but not mere truths of the intellect, which even in its noblest offspring, science, is still but a fragment of the total man; —Truths, not left to fortuitous choice, or uncertain proof; but realities, Powers of truth, which

* Coleridge. See Aids to Reflection, vol. i. pp. 169—177. Fifth edition.

actuate as well as enlighten, and which are co-extensive with our humanity at all times, in all places, and under all circumstances;— And such following the example of Plato and under the sanction of Coleridge, I name Ideas:*—

—" which be they what they may,
Are yet the fountain light of all our day.
—truths that wake
To perish never;
Which neither listlessness, nor mad endeavor,
Nor man, nor boy,
Nor all that is at enmity at joy,
Can utterly abolish or destroy!

Hence, in a season of calm weather,
Though inland far we be,
Our souls have sight of that immortal sea
Which brought us hither,
Can in a moment travel thither—
And see the children sport upon the shore,
And hear the mighty waters rolling evermore."

WORDSWORTH.

These living Truths, however,—call them Ideas, Principles, or Final aims—may, and often do, actuate man more or less unconsciously;—mighty agencies, by which in the minority of his humanity he is impelled

* First Lay Sermon; and especially Appendix (E.) Second edition. Compare Biographia Literaria, note vol. i. p. 99. The Student is also recommended to read chapters xii. and xiii. of the same work. And for a farther explanation of the term "Idea," the Reader is referred to the Preface of the Author's former Oration, 1840.

and governed, and which even in his highest state hitherto realized have not yet come to be superfluous,—impulsive currents, that bear man port-ward, favoring gales that waft him towards his destination, load-stars that guide the inexperienced navigator through the perils of deep waters, until conscious Reason shall have become his sextant and compass—high moral instincts, of which the possession by conscious insight, as Ideas, is finally secured and legitimated by the light of Reason :—

> "Et quod nunc Ratio est, Impetus ante fuit."
>
> OVID.

We smile perhaps when we read Goldsmith's amusing story, in which with exquisite humor he narrates the dialogue of the disabled soldier and confined debtor, which in ludicrous contrast with their own wants terminates in an enthusiastic pæan of "Liberty, Property, and Old England for ever!" And yet on deeper reflection who will venture to assert that the "Idea" of the British Constitution was consciously apprehended even by the statesmen and patriots, who mainly aided in its establishment? But the seed, *semen geneticum*, having found an appropriate soil, has grown and evolved itself, as it were, by a blind and silent life; and, notwithstanding the occasional frost-blight, the shock of the blast, and the stroke of the lightning, amid faction,

invasion and revolution, has reared itself into a growth, stately as the native oak of the same soil. And I have still faith enough in the English heart of my country to believe, that as long as its "Spirit" remains national in that best sense of the word which respects not a particular generation,—not the people at one time existing, but the unity of the generations, the type of our inward humanity in the flux of our outward mortality—the "Idea" of the Constitution will continue to expand, prosper and perfect itself harmoniously as by an organic life.

The philosopher of Königsberg, following Seneca, has said that the two sublimest *contemplamina* for the human mind are the starry firmament without and the moral law within. On the one hand, the image of that, which transcends the sensuous imagination, the idea of the material universe in all the order and beauty of the Kosmos;—and on the other, the overwhelming sense of the presence of God, acknowledged by a responsible and immortal spirit in the depth of his own conscience. They bring before us, indeed, the Ideas, which inseparable from our rationality at once integrate, and carry us to the utmost limits of, human speculation:—the Universe, as the absolute totality of all nature, the boundless sphere of possible experience, which can be in no respect a part of any larger whole:—the Soul, as the absolutely real in our personal being, which

above all chance or change, belongs eternally to a spiritual sphere of abiding power and imperishable causality:—and God, as the absolute cause of all reality, Supreme Being, containing all perfection, excluding all want, privation or negation, in the plenitude of goodness, truth, and love.

Gifted with reason man, amid all that is transient imperfect and uncertain within and about him, casts his look at once to the permanent, the absolute, and the perfect;—and if, in meditating on the facts of his consciousness, he ask for the source of those eternal Verities, that are the life and reality of his spiritual being, where shall he find it but in the Supreme Will causative of all reality, and how name it but the Living Truth,

> "— whence the soul
> Reason receives; and Reason is her being."—MILTON.

But thus conceived there neither is, nor can be, but One Reason:—and, in truth, it is a statement of the Christian doctrine, that the Word by whom all things were made, is essential Light and Life to his creatures;—it is the sublime doctrine revealed by St. John, that the Reason is the light and spiritual presence of the Logos: *τὸ φῶς τὸ ἀληθινὸν, ὃ φωτίζει πάντα ἄνθρωπον ἐρχόμενον εἰς τὸν κόσμον.*

Finally, Gentlemen, if Reason be the sole universal light of man, it follows that it is the

essence of all Science. There are indeed many sciences; still they must all retain the same inherency in, the same known and understood derivation from, the common trunk, of which they are living and growing branches. And it would be no less interesting than instructive to determine in each instance the approximation to ideal perfection which is due to the greater or less predominance of legislative Reason—which, either in the discovery of Law rests from its labours, or consciously employs the intellectual faculties, with all the aidances of Observation, Experiment, Hypothesis, and Theory, in order to the discovery of that Law, which is to supersede or perfect all these. My time will, however, only permit me to make some remarks on medical science, in connection with the Profession which is grounded upon it:—and I will conclude by comprising in a few short paragraphs the qualifications of a medical practitioner, considered in relation to the dignity and efficiency of the medical profession according to its ultimate aim.

I need scarcely indeed dwell upon the possession of technical knowledge and skill; since it is evident that the medical practitioner, who aims at the performance of those duties, which his profession demands, will possess himself of the requisites for its practice, which no honest man would be without. But if I am asked, What are we to understand by the amount of skill and knowledge, which may be justly de-

manded of the members of a liberal profession, and here of the medical? It is evidently this, that each severally should be capable of applying all the resources of art, which the whole profession can supply. And in this country, and at the present time, in no small proportion of cases, every man, who has fairly and in good earnest availed himself of the advantages, which our medical institutions afford, will have the satisfaction of feeling that he is doing what every other regularly educated physician or surgeon would do under the same or similar circumstances. And where, from the imperfection of our knowledge, we are unable to refer the facts and phenomena to intelligible principles, it should still be our aim and endeavour so to arrange and combine them as to bring them more and more under the conditions, which facilitate the discovery of a principle.

Hence then, in stating the qualifications of the members of the medical profession, we place as the second requisite Scientific Insight, or the possession of those laws, or rational grounds, which form at once the principles and ultimate aims of all professional knowledge. Disjoined from the patient and persevering details of Observation, the search for facts, and the wakeful attention to them when presented, the healing art would soon fall back to the state, in which during a portion of the middle ages it actually existed, when medicine was little better than a fantastic branch of Logic. On

the other hand, wholly separated from all speculative science it would necessarily become a mere collection of cases, of facts without any copula that might render them severally or collectively intelligible—nay, without any security that the supposed facts are actually such, or that the most important incidents may not have escaped the notice of the observer. But this is not all. It is not in the nature of the human mind to remain satisfied with the mere record of always imperfect cases. In the absence of insight the imagination takes its place; ostentatious affidavits supply proofs of the efficacy of the medicine and of the *methodus medendi;*

> "And puffing quacks confiding dupes allure
> "To swear the pill or drop has wrought a cure!"

The conflict of science and systematized experience with quackery, of the liberal cultivator of science with the contraband trader in nostrums and stolen fragments of knowledge,—will, I fear, endure as long as physical or moral infirmity place men in those states, which eminently favour the predominance of hope, fear, and credulity, over reason and judgment:—but, assuredly, if such be the sources of the success of fraudulent empiricism, they ought to excite an honourable solicitude in the legitimate candidate for medical practice to stand aloof, at a far distance, from the very appearance of tampering with such unholy aidances.

"To act in the spirit of science, where I can; by the mere light of experience, without scientific insight, where I must;—but with the uniform avoidance and contempt of quackery in all cases;"—this is, or ought to be, the moral code for every medical practitioner.

And with these views I hold it as little less than indisputable that the rightful claim of the profession to its due estimation by society at large can be dependent only upon Science, and upon its cultivation in union with the liberal arts and sciences—therefore entitled "Liberal," because they are cultivated without hire or compulsion on the score of their own worth and dignifying influences. It is herein that we find the ground of a liberal education common to the Professions and the Gentry of a country—of an education fitted to maintain the continued succession of a class of *Viri Liberales*, of Gentlemen, of men imbued with the Liberal sciences, of professional men, who in the full possession of a Liberal science apply it to the needs and benefit of their fellow-citizens. Nor can it be deemed of slight importance that those destined for our profession should partake of that education, which is required for the liberal professions, as an integral part of the gentry of the country, with the sense and habits of a joint training in their duties moral and religious, in their obligations as citizens, and in their sentiments of honor as Gentlemen.

Lastly;—in order to secure the enlarged education, which is to realize the ardent wish and deliberate scheme of the Council of this College for the elevation of the surgical profession,—I have only to express my unaltered conviction, strengthened indeed by the success with which the trial has been already attended, —that it is in Universities and Colleges that a medical education may be best grounded on those universal elements of science, which are the essential constituents of every liberal profession. I hold it indeed scarcely possible that any professional education can be fully accomplished except in such Institutions;—where discipline both intellectual and moral, and a pledged direction and supervision of the studies, give the requisite security for its progress and completion;—and where the *Alumni* are induced habitually to regard themselves as members of one body, and to form among themselves a correspondent law of honor, of self-respect, and of respect for each other as fellow-collegians—with the cognate habit of despising the hollow, the tricky, and the ostentatious,—in short, to form that sentiment of honor and gentlemanly feeling, in which the moral life of the individual breathes as in its natural atmosphere, with an unconsciousness, which gives the charm of unaffected manners and conduct.

So best, and so only, by the institution and protection of great seminaries of learning, in

which is cultivated Science anterior to the sciences, as the sciences to the especial professions—so only by the sense of a common derivation, by the fraternizing habits of a common training, will the members of all the professions, thus acknowledging a common birthplace, tend once more to a re-union as a National Learned Class. So best may we ensure the growth and increase of Professions—united in their attachment to all ancient institutions and in all the hereditary loves, loyalties, and reverences, that have ever been the precious birthright of an English Gentleman—Professions united with each other, and in union with the National Church,* as the universal organ, according to the Idea, for educing, harmonizing and applying all the elements of moral cultivation and intellectual progression, of which Religion prescribes the aim and sanctifies the use.

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* See Appendix D.

APPENDIX.

A.

POWERS AND FACULTIES ESSENTIALLY HUMAN.

As far as I can trace the characteristic powers of my own mind, I find in myself Will, Personality, or that which every man means when he says I, Myself;—next, Reason, or the power of contemplating necessary and universal truths, and of proposing ultimate ends for the determination of the Will,—that faculty which, when the sense shows us that the two sides of a given triangle are greater than the third, adds to this information: So it is universally, and so it must be. Further, I find the Imagination distinguished in kind from the Fancy:—as when we say that Milton is a highly imaginative, Cowley a fanciful, poet; or that Shakspeare discloses the greatest luxuriance of fancy in his Queen Mab's dream, the profoundest energies of imagination in his King Lear, and unites imagination and fancy throughout the Tempest:—to the works of Callot we willingly apply the praise of great fancy; but assuredly in a very different sense do we attribute imagination to Michael Angelo.

These are the higher powers of the mind, and

it is by the influence of these in the same mind that the remaining faculties are properly and peculiarly human, namely the Understanding, which, in the intelligent animals, we see as a faculty of selecting and adapting means to immediate purposes, but which, elevated by Free-Will, Reason, and Imagination, in man becomes the faculty of Words or significant signs, of Language in its widest extent, visual or auditual,—a faculty by which we generalize the notices of the senses, and by referring the phenomena to pre-established classes we determine their reality, independent of the impressions or images in our own minds. Then the Sense, the percipient faculty, which, when united with Sensation, and determined by a specific organization, constitutes the Senses. In learning geometry, the pupil is rightly instructed that it is not to the diagram on the paper that the demonstrations apply, but to the mental perception; that the true mathematical circle is an object of the pure sense, and exists in and for the mind alone, the diagram being only a picture or imperfect representative.

Moreover, as there is no chasm in the mind, and every faculty, therefore, must have an intermediate partaking of both; so between the understanding and the sense we find a most important faculty, and for which I know no more appropriate name than the Active or Schematic Fancy. It is that faculty by which we form the most general outline of our thoughts, the general scheme of our intended productions,—the mental scheme, for

instance, which precedes and guides the sketch of a composition, or the actual draught upon paper of the first outlines of a figure. In like manner, below the sense, and oscillating between sense and the vital sensations, (which have their representative, and appear as a peculiar power in the perception of spontaneity and sentiment of existence generally)—I place an intermediate, namely the Passive Fancy. This is the great agent in dreams, in the indescribable phantoms of delirium: but is in fact carrying on its processes every moment of our lives, and supplying the unceasing links of Association, indispensable instruments in the mechanism of recollection and memory: and thus oscillating, as I have said, between sense and life, the passive fancy accounts for the wonderful connexion between sensations and the dim, indistinct and fleeting imagery of sleep. "This is that very Mab," who

> "gallops night by night
> Through lovers' brains, and then they dream of love;
> On courtiers' knees, that dream on court'sies straight,
> O'er lawyers' fingers, who straight dream on fees;
> O'er ladies' lips, who straight on kisses dream."

These, according to my conviction, are the great constituent faculties, of which the human mind is the sum and unity:—the Will, the personal and conscious being; the Reason; the Imagination; the Understanding; the Active Fancy; the Sense, pure, and mixed as in the senses with sensation; the Passive Fancy; and the Life and Spontaneity. —*Lecture by the Author on Beauty and Expression.*

APPENDIX B.

SELF-CONSCIOUSNESS.

In any and every act of conscious reflection, I necessarily distinguish in the Self two relations, namely, Subject and Object, or Mind and Thought. In order to simple consciousness it is not indeed necessary that I should direct my attention to myself as the subject, as the Self, which is the supporter, and the one endlessly modifiable substance, of the flux of thoughts. I may have my attention so occupied by the thoughts that the Self thinking may cease to draw attention to itself, or at all events may be only dimly perceived. The child most commonly says: Fred or Johnny does this or that, or likes or thinks so and so:—he speaks of himself as of another person. He is conscious indeed, but he has no proper self-consciousness. But where I contemplate myself as thinking, when I reflect upon myself thinking, then I become aware of the double relation. I am not only conscious of the thoughts passing in my mind but also of the Self thinking. I distinguish the thoughts and the Subject in whom the thoughts are passing. It is true that when we further analyze the process, these thoughts turn out to be acts of my mind, and prove to be myself undergoing a series of changes; but it also appears that whenever I contemplate the subject thinking, I contemplate it

in some act of thought—it becomes the Object, or assumes the objective relation.

It is this which no doubt has led some philosophers to assert that we have no proper consciousness, or knowledge, or cognizance of a Self—seeing that we can never separate the self from the act of thinking in which it is engaged, and therefore never contemplate the self other than in the thoughts in which it presents itself. Is this however so?—Do we really know no more of our own self, substance or being, than the thoughts, acts, feelings and the like, which are its products or manifestations? Do we only know the soul in and by its conscious presentations or phœnomena?

Now I apprehend the very reverse of this will be apparent, if we consider the nature of self-consciousness, and if it be true, as we have stated, that in every act of self-consciousness we necessarily distinguish in the self two relations, namely Subject and Object. If I think of any thing—say for instance that I am engaged mentally with the proposition that man is mortal;—or if I will any thing, say that I determine to visit a sick neighbour;—or if I am affected in any particular way, say that I am pleasurably affected by the sight of an old friend;—in all these instances the act of consciousness may be simply that of contemplating myself in the particular circumstance specified of thinking, willing, or feeling:—but in order to constitute it an act of self-consciousness I must also be distinctly conscious that it is I, who am the Subject, I must know that it is I thinking,

willing, feeling. It is true that the Subject and Object are the same; nevertheless the cognizance which I have of the same self is necessarily in two different relations—on the one hand as object or phœnomenon, but on the other as Subject or noumenon.

So true is this, that in certain cases of mental derangement the unfortunate patient believes that he is possessed by some other mind, spirit or agent, who is obtruding his thoughts into his (the patient's) mind, and that he is under the fatal necessity of becoming conscious of mental presentations, which are not his own but another's. He has thus a morbid separation of his self-consciousness, he not only distinguishes but divides his objective and subjective self.

The apparent difficulty, which arises from the supposed impossibility of contemplating a subject other than as an Object, ceases so soon as we clearly apprehend that the cognizance here spoken of belongs to the unique instance of self-consciousness, which each man can test in himself. I am not only conscious of willing, thinking, feeling, but I am conscious in these acts that I am the agent or subject:—this is the very nature of self-consciousness, and without this it would cease to be all that we mean by self-consciousness.

The importance of the truth here asserted will be apparent if we consider that upon its admission rests the moral nature of man. Without the Will, any discussion of morals would be idle and useless, and hence it was that Kant, notwithstanding

his speculative convictions, commences his ethical enquiries by assuming the human Will, as the ground of man's liberty and responsibility and as a necessary postulate of moral faith. It is easy to see that if we have no cognizance of a Self other than in the changes which the self undergoes, we can have no knowledge of the operative cause of those changes, and the Will ceases to be a fact for us: —if we only know that the self is changed, and contemplated in a series of modifications, we have no knowledge of the subject originant: — and this must necessarily be the case, if the facts of consciousness only disclose to us the myself in its objective relation. Taking our former instance, the determination to visit a sick neighbour :—I am conscious of the determination in myself, but I cannot know how that change was wrought in myself, except as the Subject willing it, and this I cannot be conscious of as Object, because the act of willing as causative cannot be a mental result; —so soon as it becomes contemplated objectively the originative act has already ceased, and has passed into the phœnomenal. In order to constitute a moral act I must be conscious of deliberating and resolving, that is, conscious of a causative act of Will antecedent to the manifestation as the precondition of the result;—in other words I must be cognizant of the Self as Will.

The difficulty, with which this has been recognized, has doubtless in a great measure arisen from contemplating the Self as a soul or thing—viewing it by reflexion as a conceptual entity or phœno-

menon in the consciousness—taking the objective self, and this only as the conception of the unity of the conscious presentations—taking the thought of the thing instead of the thing itself or rather of the reality, which is not a thing, but the Will, the Self in the act of willing, in its unique revelation in and by the Self-consciousness. Macbeth nerves himself to the murder of Duncan, he resolves, and in resolving he is conscious of the predetermination of his Will and of his being the author of the premeditated deed; but so soon as it has become a resolve he contemplates it objectively, as a mental presentation or thought:—in the first instance he knows himself as a noumenon, in the latter as a phœnomenon.

Thus then in every complete act of self-consciousness I not only contemplate my thoughts, feelings, volitions, but I know that they are the thoughts, feelings and volitions of myself—I know that I think, feel, will:—but more than this I can abstract, from these thoughts, feelings and volitions, Myself as the Subject—I know Myself. Now in saying this, What do I affirm? Clearly this: I have attained to the knowledge of Substance, of spiritual being, of a Noumenon, of my own being as a Spirit or Will, I recognize in myself the identity of Being and Knowing. I have reached the point in which I find my personal being in affirming that I am.

What a world of false philosophy is thus got rid of can only be appreciated by those who have been bewildered by the scepticism of Hume and

Kant. It is indeed a fact of consciousness, a truth of the inward man, which can never be reached by those who wilfully exclude the spiritual, and contemplate the inward world of thought as they do outward objects:—the outward husk can never exhibit to us the spiritual, and if we only regard the self as an outward object we can never penetrate into that which constitutes its essential and true being. It is indeed a unique fact of the consciousness, and one which each man must discover for himself, but once seen its light diffuses itself over the whole sphere of mind and nature, and the man comprehends at once the spiritual being and causative ground of all within and without him.

In relation to outward nature, if we mean any thing when we use the term Substance, we mean surely that which cannot be apprehended by the senses;—it is that which stands under, is subposed, is only intelligible, and is the supporter of the phœnomenal by which it is revealed to us. Take any outward fact or phœnomenon of sensible experience, say an organized being:—we note its form and changes; but we ask inevitably what has produced this complex being, and what preserves it ever the same amid its changing phases?—The only answer is somewhat beyond the power of our cognizance by the senses, and we infer a somewhat deeper and beyond the surface—call it Life, Spirit, Law. Here we necessarily infer the causative and conservative principle. But whence do we derive the means of solving the problem? It is by turning inward and reflecting on the facts of

our own consciousness. Within ourselves we become cognizant of a causative, an originative, of a somewhat deeper and beyond that which is the object of our thoughts;—it is the subject, the Will.

The proof of the reality of Will, if such were asked for (and no doubt it has been a frequent sceptical question)—must be proved in and by every man by the fact;—and so primary is the fact that if we resolve it into any thing else it ceases to be what we mean by Will. But this we may safely assert that it can only be doubted by resolving the Will into a thing determined by outward causation, a link in a series of necessitated events—in short, if Will be regarded as aught genetic, by beginning with a contradiction in terms, namely that that which originates is passively determined and compelled—instead of being essentially and primarily originative and causative. It is very true that in willing an act, or in any act of self-determination, I am or may be induced by a variety of motives, or impulses,—my will may be moved;—but this does not exclude the power of origination, for the consent even to the outward inducement or stimulus still requires this unique act of self-determination in order to the energy requisite to the fulfilment of the deed. That it is so, who shall doubt who is conscious of the power; or if he believe that he has not this consciousness he belies his own nature. The actuation of the individual Will not only does not exclude self-determination but implies it—implies, that though

actuated, but actuated only because already self operant, it is not compelled or acting under the law of outward causation. How often do we not see that a stern resolve has produced a series of actions, which sustained by the inward energy of the man, has ended in its complete achievement: —contrast this with the life and conduct of the wayward, the fickle, and the unsteady, and it is impossible not to find the inward conviction strengthened and confirmed, that the Will is the inward and enduring essence of man's being.

But this it not only is, but man knows it and is conscious of it. But if so, he knows also the very substance of which he is—a subject, a Spirit. It is the high prerogative of man to be a Will enlightened by Reason; and it is by this actuating light that he has the power of Self-affirmation,—he affirms his being, as Reason, he knows himself to be a Person, and by virtue of the Reason under the same universal conditions as all rational beings or persons. He thus at once obtains an insight of the universal law of moral actions, and of his obligations as a rational agent. The same principles, derived from the facts of his consciousness, enable him in the same manner to contemplate the causes and laws, which are operative in outward nature, and lead him to the Prime Cause of the moral order and unity of the universe.

I touch here only briefly on these topics, as their exhibition finds elsewhere a more convenient place;—the object, which we have here had in view, is the removal of the error hitherto common,

of denying the primal fact of consciousness. In self-consciousness we are conscious of our very Self, namely of a Will self-affirmed, and in this primal act of consciousness we are cognizant of our *Esse*, call it Will, Subject, Spirit, Substance, or *Ding an sich*—and no less we contemplate in this act the identity of being and knowing.

No doubt the reader, who has been accustomed to consider substance as something different from Will or power, may be at first puzzled with this statement. But let him consider attentively whether he attaches any meaning to the term when conceived as the materialists conceive matter, as a something which remains after the abstraction of all phœnomena, all qualities, attributes, every thing by which existence of any kind is revealed or made known. He will, nay must confess that it is a mere objectless striving of the fancy, and a continual baffling of the image-making faculty. What we propose is something very different;—we refer him to the act of recognizing the Self in an act of self-consciousness. Let him attend to himself resolving, determining, willing;—he will surely admit that he is conscious of a somewhat deeper than the presentations, which appear in his objective consciousness—he will know himself as originant. Let him enunciate the primal fact of his personal existence: "I am;"—he cannot but know that in this act, he knows his own being, and that it is the identity of being and knowing as his own act —he affirms himself as a Will.

We may assert then that we have the knowledge

of Substance, of a noumenon, that the only intelligible conception of substance is Will or spirit, and that we come to this knowledge in and by an act of Self-consciousness;—and further that this is the true notion of Substance, beyond which there is nothing to know or to fancy.

If it were asked what are the grand difficulties, which have opposed themselves to the establishment of a sound philosophy, and to the building up of a speculative system upon the basis of Realism,—difficulties, implying doctrines so incompatible with the natural expectation, that philosophy is, or ought to be, the complement of common sense, as to deter men in general from the pursuit and to regard the study as a mere waste of time,—I think it would not be difficult to enumerate the main errors, which have deflected philosophy from the right course, and to point out the remedies for the aberrations of speculative philosophers.

One of the greatest difficulties, in the way of a true philosophy and of a well grounded system of Realism, is and has been the position, maintained by Hume and Kant, that we have no proper Self-consciousness or Knowledge of a Self, and that what we call Self-consciousness is the cognizance only of the mental presentations of that which we may infer indeed to be a one mind, but of which we have no knowledge beyond its manifestations in the consciousness—its appearances or phœnomena. In other words that consciousness is a looking glass in which we may see ourselves

reflected, but only as the images, which the looking glass presents—or that the conscious mind consists merely of a multiform flux of thoughts, of the supporter, substance, and inherent connection of which, we are utterly ignorant. Thus all reality of a mind or self, a substance or spirit, is at once destroyed, and the *soi-disant* philosopher is left to deal only with thoughts, with a representative shadow or image of the thinker himself or of a mind, which according to this view is beyond the limits of knowledge. To this difficulty I have endeavoured to supply a solution, which (whatever its success) may have at least the value of calling the attention of the student of philosophy to a problem worthy of the attention of all lovers of truth.

A second and no less pernicious error is the view of the nature of Perception, which seems to beset all attempts to overbridge the apparent chasm between the mind of the percipient and outward things or objects, and which has pressed sorely on philosophy from the so-called Idealists to the present time—the view namely that we do not perceive external objects, but that we are only cognizant of certain affections of our own being, sentient and conscious, of the causes of which we are ignorant—that what we call things and outward realities are really and truly only modifications of the percipient subject. And thus, as in the former instance the self was removed, so here the outward world vanishes into shadows, and in both cases the reality eludes our grasp.

A third important defect, common to all schemes of philosophy, is the utter want of any living, organic principle, any source of reality causative of being. We are continually referred solely to the Intellect, and the method of philosophy dwindles into Logic and logical processes. Now the mere intellect, essential though it be in constituting Forms and Relations, contains in itself no life nor causativeness. This defect has been supplied, and perhaps only it may be said, by Coleridge in the fundamental principle of his philosophy, Will as deeper than, and inclusive of, Intellect.

But the fourth grievous impediment to philosophy is the want of an adequate notion, and in too many instances the utter ignorance, of Reason as contradistinguished in kind from the Understanding and merely logical faculties, as the peculiar gift to man constituting his rationality, as the Light or influx common to all men manifesting itself in Ideas or those principles, in which the proper humanity essentially consists. Reason is the potentiating force, of which the spiritual or real man is the result. It is the idealizing power; —the power, instinct, and inherent tendency of man to contemplate all his thoughts feelings and strivings in their perfection, integrity, unity, universality, totality, absoluteness. It is the immediate revelation to him of the spiritual image, in which he was created and towards which he cannot but acknowledge himself bound to strive— it reveals to him law, moral and physical, and with their absolute necessity, the absolute prin-

ciple of freedom, as identified therewith in the Supreme Will, the absolute cause of all reality.

Fifthly and Lastly, We have to deplore amongst the defects of philosophy, the sad forgetfulness of the τὸ θεῖον, of the divine spirit in all and through all. That this arises from too exclusive attention to the senses and to the faculty judging according to sense, and to the interests arising out of them, can scarcely be doubted; and this defection from his spiritual nature can scarcely be otherwise than expected, so long as man remains the ἄνθρωπος ψυχικός. Something may likewise be attributed to the erroneous schemes of theology, which on the one hand confound God with the world, and end in pantheistic atheism, and which on the other separate God from the world, and by aiming at a pseudo-monotheism resolve themselves into a negative and lifeless abstract of spirituality, to which there is no human correspondency. But the main cause, I fear, must be attributed to the too prevalent want of reverence—the neglect, in the present day, of the sense of the superior, and the absence of the habit of seeking and contemplating in the higher that complement to our own inferiority, which a just appreciation of our manifold defects necessarily begets, together with feelings which are the very opposites to self-conceit, arrogance, and presumptuous ignorance.

The rightly understood doctrine of the Logos will be found an effectual antidote against these mischievous consequences, and the sublime views

of John and Paul will still guide us into all truth. And I may be, perhaps, permitted to say, without being suspected of derogating from the authority of the Catholic Church, that the doctrine of the Trinity found in the writings of those divinely gifted men, and implied throughout the Scriptures of the New Testament, only needs to be apprehended in its full and living import in order to claim its place as a truth of reason. It is not here the place to carry out this all-important investigation :—but conceive the doctrine as affirming that the Deity must be contemplated in three Relations;—that these however are not mere Relations, but Realities;—not only Realities but the highest Realities; —and again that these are not dividuous entities, such as three individual men, but one and the self-same Spirit in distinctive self-hypostatic acts;—and you may then at least begin to acknowledge the value of a doctrine, which preserves for us the idea of God in its integrity :—First as One, above and unconfounded with nature and the world, as the safeguard against pantheism;— Secondly, as the Divine Alterity, the divine principle in all, and through all, derivative being, the Humanity, which worketh in all men, as the effectual preventive against degrading anthropomorphism and the misty and unintelligible fancies of abstract theism;—Thirdly, as the divine Life, which in preserving the distinctness of the Relations unites and perpetuates them, as the necessary integration of the idea, and the corrective to the

possibility of contemplating God other than as indivisible Unity.

But the extreme value and high importance of the doctrine of the Logos will be brought nearer to human interests and be made more apparent if we contemplate it as exhibiting to us the idea of the Humanity. The instincts of Reason never permit us to rest until we have evolved that perfect exemplar of man, which exhibits him as the child of God. We become conscious indeed of this high descent only under the clear conviction of the degradation, which we have suffered, and in the conflict of the double nature, which the natural and spiritual man presents: but as the doctrine above referred to gives us the assurance of our heavenly descent and birthright, so likewise it opens to us our high destination, and the conditions under which regenerate man may achieve his re-union with God. It sets before him at once His spiritual being, as the alone true reality, and as that standard according to which the worth of all things is to be judged: "Be ye perfect even as your Father which is in heaven is perfect." The education of the moral being and the development of the spiritual self, of which the end is Holiness, are brought before us as the one thing needful; and as the Logos is the power, and divine grace the condition, of effectuating this living change in fallen man, so we have to pray and strive to be made partakers of God's spirit that we may finally become regenerate in Christ, even in the image of God in which we were created. Hence the fundamental idea of Chris-

tianity is the salvation of the world by the Logos.* Christianity alone sets forth the full and clear doctrine of man as a fallen creature, and the power and means of his restoration—the key to history and the only safe foundation for individual life and conduct.

APPENDIX C.

MATHEMATICAL EVIDENCE.

THE Mathematician having first demanded a power, which no man can deny, begins by making his own terms. By the Postulates he asserts his power of productive action; by the Definitions he determines what the product shall be, and by what name it shall be known. A cone may signify elsewhere what you will, but the geometrician speaks of a cone, which he himself has created by voluntarily presenting to himself a right-angled triangle that turns round on one side,—it is a construction, the product of which has its birth and existence within the mind. And this power must be presupposed in order to the possibility of contemplating outward objects in similar relations.

But, Secondly, and which distinguishes the mathematical evidence from the logical, as the former

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* "*Certum propriumque fidei catholicæ fundamentum Christus est.*"—Augustini Euchirid. § 5. Compare *Nitsch Christliche Lehre*, p. 125.

contradistinguishes it from the experimental, the mathematician always and essentially reasons intuitively. The conceptions of the logician may be accompanied with conceptions, mixed or pure, but those of the mathematician must be presented intuitively;—immediate presentations *in concreto*, in contradistinction from the knowing a thing mediately by representative marks obtained by abstraction, make the evidence mathematical. And to contemplate our knowledge *in concreto*, and this by an act of the mind, is what we mean by construction. And this is only possible, when the intuition and particular construction contain nothing else but the forms of the sense itself, considered apart from the sensibility;—the form in my own mind being anterior to all actual impressions from without, and being that which predetermines the mode in which outward objects can be contemplated by me.—COLERIDGE.

APPENDIX D.

NATIONAL CHURCH.

THE Clerisy of the nation, or National Church, in its primary acceptation and original intention, comprehended the learned of all denominations; the sages and professors of the law and jurisprudence; of medicine and physiology; of music; of military and civil architecture; of the physical sciences, with the mathematical as the common organ of the preceding; in short, all the so called liberal arts and sciences, the possession and application of which constitute the civilization of a country, as well as the theological. The last was indeed placed at the head of all; and of good right did it claim the precedence. But why? Because under the name of theology, or divinity, were contained the interpretation of languages; the conservation and tradition of past events; the momentous epochs and revolutions of the race and nation; the continuation of the records; logic; ethics; and the determination of ethical science, in application to the rights and duties of men in all their various relations, social and civil; and, lastly, the ground-knowledge, the *prima scientia*, as it was named, PHILOSOPHY, or the doctrine and discipline of Ideas.—*Coleridge, on the Constitution of the Church and State, according to the Idea of each*, 1839.

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