OPENING ADDRESS AT THE UNIVERSITY OF EDINBURGH, BY SIR DAVID BREWSTER.

On Monday afternoon, the winter session of the University of Edinburgh was publicly opened by the delivery of an introductory address by Principal Sir David Brewster, in the General Assembly Hall. The hall was crowded in every part, and the Principal was received with applause as he entered the hall, accompanied by Dr. John Brown, the Rector's Assessor; Professors Crawford, Stevenson, Swinton, Syme, Balfour, Bennet, Playfair, Simpson, Blackie, Allman, Fraser, Pillans, Kelland, M'Dougall, Miller, Tait, Christison, &c. The Lord Provost was also present.

The Rev. Professor CRAWFORD having opened the proceedings with prayer,

Principal Sir DAVID BREWSTER rose, amidst loud applause, and delivered the following address:—The duty which annually devolves upon me at the opening of the session, however agreeable in itself, presents some difficulty in its discharge. While many of you have just left the school in which you commenced your literary career, a large number have made considerable progress in their studies, and others are about to commence or continue those peculiar pursuits which may fit them for one of the learned professions, or for the more adventurous occupations of a commercial or military life. Occupying, as you do, such different positions in the curriculum of study, I might offer you a few words of counsel or of warning in reference to the branches of knowledge which you are about to cultivate, but believing that this will be better and more appropriately done in the class room, I shall content myself with calling your attention to some general topics which may be of use to all of you. To every class of students the most important of all acquirements is that of professional knowledge. Without this every accomplishment, however high—every intellectual gift, however valued, within the social circle—even wit in its highest meaning, will be only an encumbrance in your ascent to that professional eminence to which all of you must aspire. But professional knowledge alone is not a qualification for professional distinction. Society has demanded other qualifications, which must be acquired at our university seats, and ascertained by examination. They are achieved, however, with but little labour, and serve only a temporary purpose. When the student, thus prepared, enters upon the practice of his profession, he is not absolved from the prosecution of unprofessional studies. The knowledge of literature and science which he has acquired is but the foundation of that general knowledge which society expects from every educated man, and to the acquisition of which he must devote every hour of leisure which is not claimed for still higher duties. It is to the nature and quality of this general knowledge, and to the personal and social advantages which it brings, that I propose briefly to call your attention. During your early and later education your attention has been directed almost exclusively to classical literature. You have acquired, to a considerable extent, a knowledge of the languages of Greece and Rome, and some acquaintance with the writings of their historians and orators and poets; but, with the exception of a little arithmetic, a small portion of mathematics, and some elementary geography, your acquirements are chiefly of a literary nature. The general knowledge, therefore, to which I am about to direct your attention does not include the studies with which you have been occupied. Such of you as have a taste and a capacity for these pursuits will, of course, prosecute them with zeal, and many of you may require, in your professional calling, to increase your knowledge of modern as well as of ancient languages. Placed as we are upon a globe of matter—surrounded by its elements—born of its dust—and fed and clothed by its productions, we can hardly dispense with some knowledge of its fruits and its flowers, and of the denizens of the earth, the ocean, and the air which have been placed under our dominion. Chemistry and botany and natural history, therefore, become departments of study which, in their elementary form, the humblest of you in capacity may advantageously pursue. In his thirst for knowledge the naturalist found an interest even in the pebble beneath his feet, and in the rude stone which he shaped for its habitation. On the very surface of the ground, as well as beneath it, he found the coal, the iron, and the lime, the grand elements of modern civilisation; and in a deeper search he discovered the gold and the silver—the great objects of the world's idolatry, and the precious stones which shine in the chaplet of beauty and adorn the diadem of princes. In a wider exploration of the rocks beneath him, he discovered the vestiges of ancient life—the cemeteries of races that had lived and perished before the birth of man, and he was thus taught the history of the earth so mysteriously written on its subterranean pavement. The sciences of mineralogy and geology, therefore, which take cognisance of these wonderful productions, cannot fail to command the attention of every educated man. But while we are exploring the earth in its caverns or on its mountains, or slumbering in security on its surface, we are startled with the operation of new forces, in which we have an immediate and personal interest. The stable earth, the unruffled ocean, the breathless air—the symbols of tranquillity and peace—the Sabbath of nature—give no indications of the physical life which they embosom. But the pulse of the earth, though often feeble, never ceases to beat; and in its feverish paroxysms we become acquainted with those beneficent arrangements which modify or counteract the necessary, though often fatal, results of material laws, imprisoning, under its elastic crust, fire and water, and other elements of danger, their explosive forces are exhausted in the earthquake, and find vent in the volcano—the safety-valve of the great caldron which boils beneath our feet. Nor is the ocean a less interesting example of wise and beneficent adaptation, when we view it as the great reservoir for receiving the superfluous waters which have washed the earth, and carried down its impurities. The receptacle of animal life, of which it has been the nursery and the grave, or which has been imported into it by its tributaries, the ocean would have been the common sewer of the earth did not the tides and the tempests shake and diffuse the turbid mixture, and the electric current, it may be, hasten the precipitation of its insalubrious ingredients. Considering the ocean but as the nursery of the whale and its congeners, or as the tram-road of commerce, it has seldom been studied under its nobler phase as the common highway of nations, which even despotism cannot appropriate, or as an essential part of the complex terraqueous apparatus which Humboldt has called "the life of the earth." From the earliest times, before the sailor trusted himself to the open sea, a certain amount of knowledge of the tides and winds was required for the safe navigation of his shores, but when he ventured across the Atlantic, or into the Indian and Pacific Oceans, or attempted to circumnavigate the globe, or reach its ice-bound poles, seamanship more advanced and science more profound were required. The currents in the atmosphere, the trade wind and monsoons, the belts of calm, tropical and equatorial, the hurricanes and tornados of the torrid zone, the thunderstorms and water-spouts of southern climates, perpetually distract the mariner in his course, and demand from him all the skill which science and experience can supply. Nor are the currents of the ocean less amenable to inquiry, and less formidable to the seaman than those of the atmosphere. The two gulf streams of both hemispheres—the currents from the poles to the equator, and from the equator to the poles, and the bores and tidal waves of the East, perform important functions in our terraqueous world, and are only now revealing to science their origin and their laws. The study, therefore, of the sea—of its movements and its physical condition, while it presents to the general reader topics at once popular and instructive, affords to the philosopher a rich and boundless field of research, and must eventually promote the highest interests of humanity and civilisation. As a new department of science, which has received the name of "the geography of the sea," it has already excited the notice of every nation in the Old and New World, and societies and Governments are actively employed in promoting the various inquiries which it demands, in order to shorten the voyages to distant lands, and to advance those branches of knowledge which are associated with winds and waves, and which relate to that profusion of life which has been so bountifully supplied for the food of man. With the atmosphere which surrounds us we have still more intimate relations. We know little, indeed, of the laws and perturbations of the aerial fluid which composes it, which constitutes the pabulum of life, and in which we should perish were it polluted, or scantily supplied. In its chemical relations our knowledge of it is extensive and prosperous. We have decomposed the gaseous mass into its elements, and ascertained their separate agencies in sustaining and destroying life. Its weight, its variable density, its altitude, its electrical and magnetical phenomena, its varying temperature, whether we ascend from the earth or move to different parts on its surface, have been investigated with an accuracy of result honourable to the industry and genius of philosophers. But however great be the knowledge which we have acquired of our aerial domain, when in a state of serenity and peace, we are greatly ignorant of it in a state of tumult and excitement. When the paroxysms of heat or cold smite the organisations of animal or vegetable life; when the swollen cloud pours down its liquid charge and menaces us with a second deluge; when the raging tempest sweeps over the earth and the ocean, driving beneath the surge, or whirling into the air the floating or the fixed dwellings of men; when the electric fires, liberated from their prison-houses, shiver the fabrics of human power, and rend even the solid pavement of the globe; when the powers of the air are thus marshalled against him, man trembles upon his hearth, the slave of terrors which he cannot suppress, the sport of elements which he cannot restrain, and the victim of disasters from which he is powerless to escape. But, helpless as we are under these outbursts of the elements, science has done something to lessen the danger to which life and property are exposed. The lighthouse the life-boat, and the lightning-conductor, have been valuable auxiliaries in this work of mercy. The sailor has been taught to escape from the power of the tornado, even when he is in the focus of its gyrations; and the telegraphic message, fleeter than the hurricane, warns him at distant seaports to reef his topsails and prepare for its approach. The sciences of meteorology and physical geography, which make us acquainted with the phenomena and movements of the earth, the ocean, and the air, are therefore branches of general knowledge associated with our daily life, and in the study of which we have a personal interest. If the sciences which relate to our little planet are such essential branches of general knowledge, how important must those be which describe the planetary system—the greater and more extended system of the comets, and the still greater sidereal systems which fill the immensity of space! In passing from the terrestrial to the celestial sphere, from bodies within our reach, which we can handle, and weigh, and analyse, to bodies far away from us, which we can only contemplate with our eyes, we must sometimes appeal to faith as well as to reason. If it is difficult to prove to the young or uninstructed pupil that he lives upon a globe 8,000 miles in diameter, which turns round its axis every 24 hours, and revolves annually round the sun—a body 880,000 miles in diameter, and at the distance of 97,000,000 miles; if it is difficult to prove that this home of his, with its moon to light him in winter, is but one of eight worlds, four or five of which are from five to ten times its size, that four of these planets have numerous moons to give them light, and that Neptune—the remotest of them—is 3,000,000,000 of miles from the sun; if it is difficult to explain how astronomers have measured the magnitudes and distances of these worlds, and determined their motions and mutual actions with such accuracy that they can tell where each planet and satellite was a thousand years ago, at any moment of time, and where it will be a thousand years hence, and at what hour and minute the sun and moon have been and will be eclipsed; if it be difficult, I say, to make intelligible these extraordinary facts, they may be taught as articles of faith, as a creed resting on the testimony of the wisest and most truthful of men, and on the unerring accuracy of every prediction which they make. But grand as this system of worlds is, when they are considered simply as globes of matter, how mysterious is it in its aspect, and how interesting in its contemplation, when a resistless analogy has convinced us that these planets are the seat of intellectual life—of races, perchance, more glorious than our own, more lofty in their intelligence, and more divine in their deeds and their affections! In having said that the system of comets is grander than the planetary system in the number of its bodies, and in the extent and distribution of their orbits, I fear I shall be charged with an exaggeration more akin to romance than to science. Astronomical writers have never attempted to give their readers an adequate idea of the system of comets, as a creation entirely separate from the planetary system, having nothing in common with it but the sun to illuminate and guide them both. The two systems are as distinct from each other as an overgrown colony is from the mother country, with an intermediate central power for the government of both. Comets have been described as mere visitors of our systems, as wandering stars to which the most frivolous functions have been ascribed; whereas they form a gigantic system extending from the very neighbourhood of the sun to a point in space as remote as that of the nearest fixed star, revolving in elliptic orbits with periods varying from 4 to 100,000 years. But stranger still is the mode in which these orbits are distributed in order to prevent any collision with the bodies of the planetary system. The planets all move in nearly one plane, which we may suppose that of our horizon, while the comets move in every possible plane from a horizontal to a vertical one; and, what is peculiarly remarkable as evincing the wisdom which presides over every part of the physical world, only three or four comets out of the hundreds known to us move within the belt which limits the planetary orbits. In order to have a rude idea of the difference between the two systems of bodies, let us suppose all the planets in their greatest brightness to be above our horizon in a dark night free from stars. Even if placed near each other, they would not present a much more striking appearance than the constellation of the Great Bear; but if we suppose all the comets of their system to be simultaneously visible, the whole vault of the heavens would be one gorgeous canopy of light. What the purpose is of such an extraordinary group of bodies it is in vain to inquire. The astronomer is able to calculate the form of their orbits and the reappearance of those of short periods, but the most powerful telescopes have not enabled him to discover their physical constitution, or explain satisfactorily the strange phenomena which they exhibit in the vicinity of the sun. Some of the most distinguished mathematicians of the present day, by assuming the existence of a repulsive force emanating from the sun, as an incandescent body, or as a source of electricity, have submitted to calculation some of the more remarkable phenomena, but with a diversity of result which does not inspire us with confidence. While some regard the nuclei or central parts of the comet as of little density, others believe that it is different in different comets, varying from 3, the density of ordinary rocks, to 30, a density exceeding that of the heaviest metals. While some consider comets to be inhabited, or habitable worlds, others regard them as in a state of preparation for inhabitants; but these are merely conjectures, without facts or analogies to support them. That they perform some high function in the universe will not be disputed. To believe that such a vast array of bodies has been marshalled in space to perform some functions of good or evil to the little family of worlds to which we belong would be a presumption of no ordinary kind, and somewhat analogous to the Ptolemaic conceit that a sun 880,000 miles in diameter was employed as an itinerant lamp, revolving with a velocity of 230,000,000 miles a day to light and heat our little planet, only the hundredth part of its size. If the solar system, combining the two great systems of the planets and comets, has afforded such subjects of research to the highest mental powers which have been vouchsafed to man, how desirous must we be to learn something about those sidereal systems of worlds which occupy the unfathomable depths of space. Science has penetrated even to that mysterious bourne, and the astronomer has proved that the law of gravitation is active even there, and that our own sun, with his planets, is revolving round some distant star—the type of those binary sidereal systems in which one star, doubtless, with its planets, revolves round another in periods accurately ascertained. It is to the science of light that we owe these great discoveries—a science which has never received its due place among the branches of human knowledge. Optics, indeed, is the foundation and mainstay of astronomy, and without its aid all the sciences of observation would have been limited and imperfect. In times not very remote the human eye was the only instrument by which man could investigate the works of his Maker. To objects remote in distance and gigantic in magnitude, he was hopelessly blind, and equally blind to everything minute in size, and within the range both of his sight and his touch. The light of the remotest planets never reached him, and all the secondary planets but his own were equally invisible. Had it been told to the sages of ancient times that what was invisible and almost infinitely distant would one day be distinctly seen, and submitted to their scrutiny, and that bodies almost infinitely small would appear in colossal proportions, unseen before, they would have pronounced the prediction ridiculous and the prophet insane. Reason in its highest form could not have anticipated a power so extraordinary, and imagination in its wildest mood would have ranked it as a dream. So singular, indeed, is the position of the telescope and the microscope among the great inventions of the age, that no other instrument and no other process but that which they embody could make the slightest approximation to the secrets which they disclose. The steam-engine might have been replaced by an air or an ether engine, and a highly elastic fluid may yet be found to impel "the rapid car," or to carry over the globe the ship of war or of commerce. The electric telegraph, now so perfect, might have spoken to us in the rude "language of chimes," as suggested by its first inventor; or sound, in place of electricity, might have passed along the metallic path. Even the printing press of the typographic art might have found a substitute, however inferior, in the lithographic process, and knowledge might have been widely diffused by the photographic art; but without the telescope and the microscope, the human eye would have struggled in vain to have studied the worlds beyond our own; and the elaborate structures of organic and inorganic creation would never have been revealed. The sense of sight, therefore, of which these instruments are the tools, is by far the most important of the five gateways of knowledge, whether we view it in the extent of its range, the value of its lessons, or the structure of its organs. The senses of hearing, of taste, and of smell give us no information respecting the animalcular world, and the rude touch, could it apply itself to the invisible atom, would fail to disclose either its outline or its properties. The sight alone pierces into the dwellings of animalcular life; expands the material atom into a world; lays open the prolific cells of animal and vegetable organisation; and displays to the observer the structure of those wonderful tissues which cover the fountains of intellectual and physical life. But in modern times the science of optics has taken a still higher position. When polarised light is transmitted through bodies, it suffers such changes in its transit as to indicate the form and the character of the structures through which it has passed, although that form and these structures can be seen neither by the eye nor by the microscope. Not less wonderful are the discoveries now made by the prism, which can write in lines in the spectrum of any flame the names of the metals or other elements which enter into its composition. By this process we know that all the planets, primary and secondary, are illuminated from the same source, and, what is more remarkable, that the atmosphere of the sun contains the vapours of several of the metals with which we are well acquainted. From this brief reference to those physical sciences which are the most prolific fountains of general knowledge, you cannot fail to see the importance, if not the necessity, of adding some acquaintance with them to your professional acquirements. Some of you who have the genius and taste for original research may be induced to devote yourselves to the investigation of some of the branches of science which I have mentioned, and add your names to the list of eminent members of this university who have done it honour by their writings and their discoveries. But though it can be the lot of few to attain this distinction, it is in the power of all of you, and it is the duty of all of you, to acquire that knowledge of the Creator's works without which no man is fitted even for the humblest position in the social scale. So important, indeed, is the knowledge for which I am pleading, that I hold it to be indispensable even in our elementary education. When the village scholar has learned to read, to write, and to count, and even when he has acquired some knowledge of ancient and modern tongues, he has obtained only the tools of instruction. He may have learned to read his Bible—the greatest of all lessons, provided he reads it; he may have committed to memory every sentence in the Decalogue; appropriated all the wisdom of Solomon, and apprehended the divine precepts of a greater than Solomon, while he is utterly ignorant of everything above and around him and within him—ignorant of the form, the magnitude, and the motions of his terrestrial home—ignorant of the gigantic structures which constitute the material universe—ignorant of the wonderful mechanisms on which he thinks and breathes—ignorant of the fabrics which industry prepares for his use, and of the luxuries which commerce brings from the ends of the earth and places at his door—ignorant even of the wonderful operations of that beneficent commissariat which, while he sleeps and dreams, is elaborating the materials by which he is clothed and fed. To enlighten minds so dark, the existing system of education is utterly inefficient. The teacher, however wisely chosen, has not at his command the means of imparting knowledge. He may pour it into the ear of his pupils, or extract it from the printed page, or exhibit it in caricature in the miserable embellishments of the school-book; but unless he teaches through the eye—the great instrument of knowledge—by means of truthful pictures, instruments, and models, and by the direct exhibition of the products of nature and of art, no satisfactory instruction can be conveyed. Every school, therefore, should have a museum, however small in value and limited in extent. The liberality of the neighbourhood would add to its stores, and we have no doubt that when the value of such information was recognised by the public, the overflowing collections of our university, and other public museums, would gradually surrender their superfluities to our provincial or parochial institutions. The knowledge to be acquired at school, or in after life, if not acquired there, is, of course, neither extensive nor profound. It will, therefore, be stigmatised as a mere smattering of knowledge, and there are persons who will concur in the dictum of the poet, that "a little knowledge is a dangerous thing." There are, doubtless, certain opinions and speculations which, though things known, are not knowledge, which have no useful bearing, either moral or physical, and which foster intellectual pride, and lead to dangerous errors. There are facts, too, which, when ill observed, or ignorantly misinterpreted, may lose their intrinsic value as elements of general knowledge; but a fact in science rightly understood, however simple in its nature, and isolated in its place, is a truth upon which God has set His seal, and the possession of which places in His august presence the man who has embraced and appreciated it. He who intelligently apprehends the great truth that the sun, which greets him every morning, is a globe of light and heat, which is hourly preparing the nectar and ambrosia of his food; that this sun is fixed in space, and that the earth on which he dwells is revolving with a daily and an annual motion, and is but one of eight planets controlled by the same central power, and enjoying the same benefits—the man, I say, who possesses this knowledge will be a devout astronomer, though he can neither predict celestial phenomena nor understand the theory of the planetary motions. Having given you some account of the great truths which constitute general knowledge, I might appropriately call your attention to certain other studies which I would advise you to avoid and abjure. Among the advantages of a general knowledge of physical truths, one of the most important is its protective influence against credulity and superstition, and to such of you as are educating for the medical profession such a safeguard is peculiarly valuable. In the discussion of questions of a medical nature we must not expect that kind of evidence which we demand in matters of law or of physical science. The principle of life, and the action of the mind on the bodily organs, introduce new and complex relations which expose all our reasonings to new sources of error. Hence it is, as Sir Henry Holland justly states, "that it is the want of a right understanding of medical evidence which makes the mass of mankind so prone to be deceived by impostors of every kind; whether it be the idle fashion as to particular remedies, or the worse, because wider, deception of some system, professing to have attained at once what the most learned and acute observers have laboured after for ages in vain." In proof of this, he states the remarkable fact (written in 1852), "that, during the last 20 years, he has known the rise and decline of five or six fashions in medical doctrine or treatment, some of them affecting the name of systems, and all deriving too much support from credulity, or other causes, even among medical men themselves." I am glad to say that the teaching in our university has not been tainted by heresies like these. The eminence of our professors has been recognised in foreign lands, where the healing art is in the highest state of cultivation, and I am sure you will join me in congratulating my distinguished colleague, Professor Syme, on the intelligence of this morning that he has been nominated a Chevalier of the Legion of Honour by the Emperor of the French. The difficulties inherent in all medical questions are increased tenfold in the examination of those sciences falsely so called to which I have referred. If medical men highly educated, and occupying a distinguished social position, have been seduced from the sober paths of their profession into new and ephemeral systems, which fashion sanctions and imposture sustains, we need not wonder at the temporary success of wilder theories where the illiterate are the adepts, and the ignorant are the victims. It is among the middle and the upper classes chiefly that this credulity and love of the marvellous is most conspicuous. It is rank and luxuriant among the votaries of gaiety and idleness, who are incapable of continuous thought, and who have, therefore, no faith in those forces in the material world, and in those cosmical laws which are in daily operation around us. Who that is acquainted, even superficially, with the facts of electricity and magnetism, can for a moment believe that similar forces emanate from human hands, rushing through non-conducting materials, floating them even in the air, and imparting to them a knowledge of the past, the unseen, and the future? Who that confides in revealed truth, or has the least knowledge of the relations between our mental and physical nature, can allow himself to believe that impostors, male and female, can summon the dead from their graves, and marshal them under the table, to perform the paltriest tricks that would hardly amuse the inmates of the nursery or the school-room? All such beliefs are the results of an imperfect education—of the want of general knowledge. They are the observations of ill-trained faculties, the cravings of morbid and mystic temperaments, that have been suckled on the husks and garbage of literature and reared on the rank pastures of our mushroom publications. In the past history of our race these superstitions have operated fatally on the happiness of man; and no sooner has science exploded the most rampant, than another starts into its place. At the present moment a very remarkable speculation is claiming the recognition of science; and so distinguished is its author, both from his scientific and social position, that it demands the most rigid scrutiny from the friends of religion and physical truth. This speculation is contained in the very able work of Mr. Darwin, entitled "On the Origin of Species by Means of Natural Selection; or, the Preservation of Favoured Races in the Struggle for Life." In this volume, replete with facts in natural history of the most interesting kind, Mr. Darwin endeavours to prove that as "all living things have much in common in their chemical composition, in their germinal vesicles, in their cellular structure, and in their laws of growth and reproduction," we may infer from analogy that all the organic beings which have ever lived on this earth have descended from one primordial form into which life was first breathed by the Creator." Such of you as have observed animal and vegetable life only in the organic forms which exist in your vicinity may well be surprised at a doctrine like this, but those who have visited our metropolitan museums, and seen the glorious forms of life which they contain, from the mite to the elephant, from the tadpole to the whale, from the humming-bird to the eagle, from the mushroom to the oak, from the trilobite of the rocks to the mammoth, and from the ape to man, will be still more startled at the conclusion that man, brute, reptile, fish, fowl, and plant have one common ancestor. But Mr. Darwin has appealed to facts and principles in support of his theory, and therefore we must appeal to facts and principles for its refutation. He maintains—1. That variations in species actually arise in the course of descents from a common progenitor. 2. That many of these variations are an improvement on the original stock. 3. That by a continued natural selection, from among these improved specimens, occasioned by a struggle for life, the most vigorous individuals become the progenitors of the next generation. 4. That there is a power in nature everywhere effecting this selection. Naturalists of high authority have followed Mr. Darwin through all his arguments, and have shown in the clearest manner that his theory is inconsistent with the very facts upon which he has rested it. It is out of my sphere, and yours also, to discuss this question as one of natural history; but, even in this aspect of it, we may allow that species do admit of great variations, and may by new methods of feeding and culture rise to a higher scale, and yet deny that there is any evidence even of one species of the same genus having passed into another, and still less that fish have passed into fowl, or birds into beasts, or quadrupeds into man. We have absolute proof, indeed, of the immutability of species, whether we search for it in historic or geological times. The cat and dog embalmed in Egypt 4,000 years ago are the same as the cat and dog of the present day; and in the fossil remains of the pre-Adamite ages there is not the slightest proof of any variations in the successive inhabitants of the earth. Mr. Darwin himself admits, to use his own words, "that this is a most obvious and grave objection to his theory;" but yet he conjectures that rocks still undiscovered, and myriads of years older than the Cambrian or azoic strata, may still bear testimony to his views. When such strata with such indications are discovered, when the instinct of the elephant shall have expanded into reason, and the chatter of the parrot have its climax in speech, we may then claim kindred with the brutes that perish. In referring to the changes which have taken place in the university since our last annual meeting, I regret to say that our losses have been unusually severe. The Faculties of Theology and Law have been deprived of one of their most distinguished members by the death of Dr. James Robertson, Professor of Divinity and Church History, and Mr. Shank More, Professor of the Law of Scotland. Dr. Robertson was born on the 2d of January, 1803, at Ardlaw, in the parish of Old Pitsligo, in the county of Aberdeen. He was the son of Mr. Wm. Robertson, farmer at Ardlaw, who survives, at the age of 86, to mourn the loss of his son. Having completed his education for the ministry, at Marischal College, Aberdeen, he was chosen parochial schoolmaster at Old Pitsligo, and soon after this he was appointed head-master to Gordon's Hospital in Aberdeen. In 1832 he was presented to the church and parish of Ellon, in the gift of Lord Aberdeen, and in 1843, he was appointed to the chair of Church History in this university, and also to the secretaryship of the Bible Board—situations which had become vacant by the resignation of Dr. Welsh. In the General Assembly, to which he was returned, for the first time, in 1832, and of which he was chosen moderator in 1857, Dr. Robertson was distinguished by his great knowledge of ecclesiastical affairs, and by an eloquence and fluency as a public speaker which raised him to a high position in the Church. Though Dr. Robertson's time was chiefly devoted to duties of an ecclesiastical nature, his studies took a wider range. During his incumbency at Ellon he was appointed a member of the Poor-law Commission, and he took an active part in the inquiries which led to the establishment of a poor law in Scotland. In his later years his attention was directed to the study of improved methods of cultivating the soil; and in the very year in which he died he read an elaborate paper on the currency, at the meeting of the Association for the Advancement of Social Science which was held at Glasgow. But, eminent as Dr. Robertson was as a parochial minister, as a leader in the General Assembly, and as a professor in the university, his memory will be cherished with a deeper veneration as the earnest and successful advocate of the endowment scheme of the Established Church—that great missionary enterprise by which he raised nearly half a million of money, for the establishment and endowment of more than 65 parishes in localities without a Christian ministry. Dr. Robertson was present at the opening of the college in November last, but though apparently in his usual health, his constitution, naturally robust, had been undermined by mental and physical labour; and he had hardly entered upon the duties of his chair when, after a few days' illness, he expired on the 2d of December, 1860, in the 58th year of his age. Professor John Shank More, whose loss we have also to lament, was the son of the Rev. George More, the respected minister of a congregation at North Shields, in connection with the first Seceders from the Established Church of Scotland. He was born at North Shields in 1784, but received his education in Edinburgh, where, at an early age, he evinced a predilection for the study of the law. He was called to the bar in 1806, and soon displayed such learning and talent, united to strong and practical good sense, that he took an excellent place in practice, as an efficient advocate and a safe adviser. In 1827, Mr. More published a useful edition of "Erskine's Principles of the Law of Scotland," and in 1832 appeared his chief work, a "New Edition of Lord Stair's Institutions of the Law of Scotland. In editing this work, which Mr. More regarded rather as a treatise on general jurisprudence than as a mere digest of municipal law, and in bringing down the exposition of the law of Scotland to the present time, he enriched it with notes and illustrations so richly stored with learning and ripe reflection, that they gained for him a high place in the estimation of the profession and the public; and his book has ever since been quoted with respect, both in argument at the bar and in opinions delivered from the bench. It was, therefore, with the approbation of the bar and of the public that, on the death of Professor George Joseph Bell, he was appointed to the chair of Scots Law, the duties of which he had discharged with such zeal and ability that the university conferred upon him the honorary degree of Doctor of Laws. Professor More had been for 35 years an elder in the kirk-session of St. George's, known by his earnest and unobtrusive piety, and a walk and conversation becoming an office-bearer of the Church. Though devoted to the study of the law, he devoted a considerable portion of his leisure to the acquisition of general knowledge. In his valuable library he had provided the means of gratifying his taste for the arts and sciences, and he derived much enjoyment from the society of those who had successfully cultivated them. He had been long a member of the Royal Society of Edinburgh, and he was frequently the only representative of this university at the meetings of the British Association for the Advancement of Science, of which he had been a member almost from its commencement. In his domestic and social relations Professor More was greatly beloved and esteemed. Having been intimately acquainted with him for upwards of 40 years, I had many opportunities of knowing how generously his professional advice was at the service of his friends or of any public institution that required it. After discharging the duties of his class during the last session, he was attacked with a lingering illness, which terminated fatally on the 12th July, in the 77th year of his age. Such, gentlemen, is a brief notice of the two eminent individuals whose loss the university deplores. In the energy with which they prosecuted their early and their later studies, in the purity of their character, and their success in life, you have before you the path in which you must tread to reach the eminence which they attained, and secure the esteem which they enjoyed. When a public benefactor has survived, as Professor More has done, the life-terms allotted to his race, we can hardly mourn the event which takes the Christian to his rest; but when he is struck down, as Dr. Robertson was, almost in the noon of life, and in the very climax of his labour, we stand appalled at the mysterious dispensation which lays prostrate the sage in his prime, while the feeble arm, the dim eye, and the tottering limb are spared.

The address of the learned principal was, unfortunately, owing to the construction of the hall, very imperfectly heard by a large proportion of the audience; but it was frequently applauded during its delivery, and at the close Sir David resumed his seat amidst loud and general applause.

The Rev. Professor CRAWFORD pronounced the benediction, and the meeting separated.

THE COLLIERY EXPLOSION NEAR WIGAN.—We have to record an addition to the number of deaths caused by the explosion at the Prince Albert pit, Shevington, on Friday last. Robert Holcroft, one of the men injured, died on Saturday night. Ridling, the under fireman, whose uncovered lamp is said to have caused the fatality, is not doing very well, but the reports as to Ellison, his second companion, are rather more favourable. Reed, the shocking death of whose wife we have already recorded, is said to be in a dangerous state; but Thompson, the fifth man injured, is recovering. The inquest was opened on Saturday evening, at Shevington; but no evidence was taken beyond that necessary for the identification of the bodies. After this had been obtained an adjournment took place. The inquest on the body of Ann Reed, who died from fright, on Friday afternoon, has also been held. The evidence of deceased's daughter was that she and her mother were at Wigan on the day of the explosion, and were at the railway station waiting to return home, when deceased was informed that her husband had been injured. The news seemed to affect her greatly; and she became worse when, on approaching home, she saw the surgeon's horse at the door. Witness went to look at her father, and on her return deceased asked if he was badly hurt. She replied he was not; on which deceased exclaimed that she knew he was, and that he would never recover. Her mother then fell down, and died in a few minutes. The jury returned a verdict of "Died from fright."—*Manchester Guardian.*

MURDER AND ROBBERY.—The body of a man, named William Lewis, who resided at Hall Green, near Bilston, was found on Sunday morning lying in the road, near Coseley. A large wound was discovered on the back, with bruises on the arms and legs. There was also the appearance of a heavy blow having been given on the left temple, as well as on the forehead and other parts of the face. About three o'clock in the morning a Mrs. Waller states that she heard some one cry "Murder" several times, with such additions as "Do have mercy upon me, and don't kill me." She did not get up to raise any alarm, as she was afraid to leave her husband, who was subject to fits. Another woman, Mrs. Solloway, heard similar cries, and went to the window, when she observed an individual with a large stick, whom she took to be a Richard Hickman. She heard groans, and some one cry, "Help, help; I am William Lewis." Richard Hickman, who is a watchman employed by a number of tradesmen to guard their property, admitted, on being confronted with Mrs. Solloway, that he threatened to lay a stick about Lewis's back, but did not carry his threat into effect. The pockets of the deceased had been turned inside out, and his money abstracted. Being an iron-roll turner at Deepfields ironworks, he was in the receipt of good wages, and was, therefore, supposed to "have a little money." He and the watchman lived in the same yard, but Hickman declares that he did not know him when he threatened to beat him with his stick. When discovered in the road deceased's coat was turned over his face.

MELANCHOLY OCCURRENCE.—On Friday an inquest was held at Aspull, before Mr. C. Duffield, on the bodies of two drawers, named Joseph Shepherd, 20, and Robert Bond, 16, who were killed under the following circumstances on the previous Wednesday:—On the morning in question, about six o'clock, the boys, with a collier, named William Melling, got into the cage at the Morris-lane Pit, belonging to the Earl of Crawford and Balcarres, at which they worked, for the purpose of descending. According to the evidence of Melling, they descended half the way all right, when they experienced what witness called a "wriggling" sensation, and they found the rope begin to slacken and coil. They fancied the rope of the ascending cage had broken, and thinking their position dangerous, Bond requested they should slide down the rods. This was agreed to by Melling, who first commenced the perilous journey. He reached the bottom in safety, but he had not been down more than a second or two when the two lads came tumbling after him. Bond fell with his head on an iron plate, from which he rebounded into the shaft; and Shepherd on to the dib-hole scaffolding, and thence to the bottom—the first having his jaw and back broken and dying almost immediately, and the second having his leg broken, and living a short time. On examination it was found that the accident was caused by Shepherd's jacket catching between the cage and the conducting rods. The jacket was found firmly fixed in this position, where it was evident Shepherd had had to leave it before he could attempt to descend. Verdict, accidental death.—*Western Daily Press.*

NEW STREETS.—A return made by the First Commissioner of Works states that the Spitalfields line of street of 700 yards; Dock-street, 285 yards; New Oxford-street, 770 yards; Endell-street, 350 yards; and St. Martin's-lane and Cranbourne-street alteration, 370 yards, together cost £837,560. The Spitalfields extension, 520 yards, cost £211,689; and the Pimlico improvements, 378 yards, £62,478. A return from the City states that New Cannon-street, 1,166 yards in length, cost £589,470; and the completion of the improvements authorised to be made by the Clerkenwell Improvement Commissioners, Victoria-street, Clerkenwell, 1,120 yards, £333,675; but there is building ground not disposed of in consequence of railway communication in the line of street being sanctioned by Parliament. Upon the whole 5,659 yards of street, not quite 3¼ miles, there has thus been laid out £2,034,872, or £359 upon a yard's length of street.—*Building News.*