chain of islands appear to be rising from a position of depression, the line of the great Chilian valley is probably still sinking, for near the head of the Gulf of Penas, and south of the isthmus of Ofqui, that connects the peninsula of Taitao with the mainland, are found forests so recently submerged as to render it necessary to be cautious in steering amongst the tree tops. Future generations of mankind, the author thinks, may see the isthmus submerged beneath the ocean, above which it is even now but slightly raised.

Part of this isthmus is occupied by Lake San Rafael, which is remarkable as the "terminus of an enormous glacier that scatters huge icebergs about its waters." "Is there any other glacier," the author asks, "descending to sea level in latitude 47° either N. or S.?" We know of none; but however that may be there are several that reach the sea between this point and the Straits of Magellan; and yet southern Patagonia is a land of luxuriant vegetation, at least on its western coasts. "Forest was everywhere about us, dense, shadowy, dark and generally dripping. The long lines of the higher sierra were thick with it up to the point where the granite cliffs polished and smoothed by ice-cap and glacier gave foothold to vegetation only on their flat ledges. The little islets that seemed to chase one another through the streaky grey sea were rounded and packed with it." In the Ultima Esperanza district in latitude 52° there are grazing grounds where the sheep fatten quickly on the tufted grass of the country, and are left to find their own shelter, while in the neighbouring woods the puma waits his opportunity as he does in the tropical forests of Brazil. And over the whole country, mountains, valleys, and pampas alike, blow untiringly the strenuous western winds, for the most part in blustering gales that succeed one another in quick succession. "In no country in the world," remarks our author, "must 'weather' and climate be so differentiated as in Patagonia. The weather is bad as bad can be —wild and boisterous, bursting into fury, breaking into sunshine, freezing the blood in one's veins with a biting blizzard, or suffocating the system with the still steady glare of a noonday sun, and it may do all this and more in the course of a few hours' interval; but whether storming or shining, tearing one's tent to rags or bathing the landscape in sunshine, who can describe the life-giving, purifying, sweetening, strengthening effects of the climate."

Such is Patagonia, a land that seems destined to nourish a hardy race woven of many strands, among which the sturdy Welsh colonists of the 16th of October Valley, of whom the author has much to tell us, will not be least important. To the man of science it is a land of striking illustrations of long established principles and of problems that will require many years of research to solve, for of the story of its making scarcely the first chapter—a chapter of which Darwin wrote the opening pages—is yet complete. J. W. E.

LORD KELVIN AND GLASGOW UNIVERSITY.

THE installation of Lord Kelvin as Chancellor of Glasgow University, which took place in the Bute Hall on Tuesday, is an event which has few, if, indeed, it has any, precedents in the recent annals of our universities. The Chancellor is the head of the whole university, but in practice he is rarely present except on ceremonial occasions, and a great part of the work which he has had to do officially is done for him in Scotland, as it is at Oxford, Cambridge, London, or in the newer English universities, by the Vice-Chancellor. Many occasions arise, however, when it is of importance to the universities concerned that statesmen, such as the Prime Minister, who is Chancellor of Edinburgh, Mr. Chamberlain, who is Chancellor of Birmingham, Lord Rosebery, who is Chancellor of London, and Lord Spencer, who is Chancellor of Manchester, should represent their universities in Parliament or elsewhere, and such men have usually been elected not so much on account of their own connection with the universities they preside over as of the eminent place they have taken in the State, and the weight which must on all occasions be attached to their considered opinions. Lord Kelvin has been connected with the University of Glasgow since his early boyhood, he has spent his life within her walls, and he built up his enduring fame during the fifty-three years when he was professor of natural philosophy in the university.

Lord Kelvin's father was a north of Ireland man, preparing for the ministry of the Presbyterian Church. In his day, and until the foundation of the Queen's Colleges in Ireland, Glasgow was the university to which many north of Ireland men resorted, and Lord Kelvin's father was a distinguished student in Glasgow, gaining prizes in many classes more than ninety years since. About eighty years ago he gave up his studies for the ministry and became professor of mathematics in the Belfast Academical Institution. Eight years later—in 1832—he was elected to the chair of mathematics in Glasgow, which he filled for sixteen years with eminent success. There were no better text-books anywhere than those which he published on the subjects of his chair, and the small number of his students who remember him can testify that they never met a clearer or better teacher of mathematics. Prof. James Thomson had a genius for teaching other things besides mathematics, and both Lord Kelvin and his elder brother, who was professor of engineering first in Belfast and afterwards in Glasgow, owed the best of their education to their father. Lord Kelvin was only twenty-two years old when the university had the courage to elect him to the chair of natural philosophy, on the strength of his quite exceptional brilliancy as a student first in Glasgow and afterwards in Cambridge. How he has discharged the duties of his chair and how wide and fruitful have been his conception of its duties is known to the whole world of science.

On Tuesday, after Lord Kelvin had been formally installed as Chancellor of the University, he proceeded to confer the following honorary degrees of LL.D. on the recommendation of the Senate.

Princess Louise (Duchess of Argyll), who was president of Queen Margaret College until the college was incorporated with the university in 1893. The Marquess of Ailsa, who has taken a great interest in naval architecture, and in its practical application to the building of yachts and other vessels. Dr. J. T. Bottomley, F.R.S.; Dr. James Donaldson, principal of the University of St. Andrews; Admiral Sir John Charles Dalrymple Hay, G.C.B., F.R.S.; Dr. J. M. Lang, principal of the University of Aberdeen; Mr. G. Marconi; Mr. Andrew Graham Murray, M.P., Secretary for Scotland; the Hon. C. A. Parsons, F.R.S.; and the Lord Provost of Glasgow, Sir John Ure Primrose, Bart.

After conferring these degrees Lord Kelvin delivered an address, in the course of which he spoke as follows:—

To be Chancellor of one of the universities of our country is indeed a distinguished honour. For me to be Chancellor of this my beloved University of Glasgow is more than an honour. I am a child of the University of Glasgow. I lived in it sixty-seven years (1832 to 1899). But my veneration for the ancient Scottish university, then practically

the university for Ulster, began earlier than that happy part of my life. My father, born in County Down, was for four years (1810 to 1814) a student of the University of Glasgow, and in his Irish home, first as professor of mathematics in the newly-founded Royal Belfast Academical Institution, his children were taught to venerate the University of Glasgow. One of my earliest memories of those old Belfast days is of 1829, when the joyful intelligence came that the Senate of the University of Glasgow had conferred the honorary degree of Doctor of Laws on my father. Two years later came the announcement that the faculty of Glasgow College had elected him to the professorship of mathematics.

In 1834, two years after my father was promoted from Belfast to the Glasgow professorship of mathematics, I became a matriculated member of the University of Glasgow. To this day I look back to Prof. William Ramsay's lectures on Roman antiquities and readings of Juvenal and Plautus as more interesting than many a good stage play that I have seen in the theatre. Happy it is for our university, and happy for myself, that his name, and a kindred spirit, are with us still in my old friend and colleague, our senior professor, George Ramsay. Greek, under Sir Daniel Sandford and Lushington, logic under Robert Buchanan, moral philosophy under William Fleming, natural philosophy and astronomy under John Pringle Nichol, chemistry under Thomas Thomson (a very advanced teacher and investigator), natural history (zoology and geology) under William Couper, were, as I can testify by my own experience, all made interesting and valuable to the students of Glasgow University in the 'thirties and 'forties of the nineteenth century. Sandford, in teaching his junior class the Greek alphabet and a few characteristic Greek words, and the Scottish pronunciation of Greek, gave ideas, and something touching on philology, to very young students, which remains on their minds after the heavier grammar and syntax which followed have vanished from their knowledge. Logic was delightfully unlike the Collegium Logicum described by Goethe to the young German student through the lips of Mephistopheles. Even the dry bones of predicate and syllogism were made by Prof. Buchanan very lively for six weeks among the students of logic and rhetoric in Glasgow College sixty-seven years ago; and the delicious scholastic gibberish of "Barbara, Celarent" remains with them an amusing recollection. A happy and instructive illustration of the inductive logic was taken from Wells's "Theory of Dew," then twenty years old. My predecessor in the natural philosophy chair, Dr. Meikleham, taught his students reverence for the great French mathematicians, Legendre, Lagrange, Laplace. His immediate successor in the teaching of the natural philosophy class, Dr. Nichol, added Fresnel and Fourier to this list of scientific nobles; and by his own inspiring enthusiasm for the great French school of mathematical physics, continually manifested in his experimental and theoretical teaching of the wave theory of light and of practical astronomy, he largely promoted scientific study and thorough appreciation of science in the University of Glasgow. In this hall you see side by side two memorial windows presented to the university to mark permanently its admiration of three men of genius, John Caird, John Pringle Nichol, and his son, John Nichol, who lived in it, and worked for it and for the world, in the two departments of activity for which universities exist, the humanities and science. As far back as 1818 to 1830 Thomas Thomson, the first professor of chemistry in the University of Glasgow, began the systematic teaching of practical chemistry to students, and by aid of the faculty of Glasgow College, which gave the site and the money for the building, realised a well equipped laboratory, which preceded, I believe, by some years Liebig's famous laboratory of Giessen, and was, I believe, the first of all the laboratories in the world for chemical research and the practical instruction of university students in chemistry. That was at a time when an imperfectly informed public used to regard the University of Glasgow as a stagnant survival of mediævalism and to call its professors the Monks of the Molendinar!

The university of Adam Smith, James Watt, and Thomas Reid was never stagnant. For two centuries and a quarter it has been very progressive. Nearly two centuries ago it had a laboratory of human anatomy. Seventy-five years ago it had the first chemical students' laboratory. Sixty-five years ago it had the first professorship of engineering of the British Empire. Fifty years ago it had the first physical students' laboratory—a deserted wine cellar of an old professorial house, enlarged a few years later by the annexation of a deserted examination room. Thirty-four years ago, when it migrated from its four hundred years old site off the High Street of Glasgow to this brighter and airier hill-top, it acquired laboratories of physiology and zoology, too small and too meagrely equipped. And now every university in the world has, or desires to have, laboratories of human anatomy, of chemistry, of physics, of physiology, of zoology. Within the last thirty years laboratories of engineering, of botany, and of public health have been added to some of the universities of the British Empire, with highly beneficent results for our country and the world. All these the University of Glasgow now has. During the last fifty years our university has grown in material greatness and in working power to an extent that its most ardent well-wishers in the first half of the nineteenth century could scarcely have imagined possible. Two successive legislative commissions (1858 and 1889) have re-formed its constitution and broadened its foundations, and added to its financial resources, and admitted women to its membership, with all the privileges of students and graduates. Splendidly liberal subscriptions by the people of Glasgow and by a world-wide public outside, backed by powerful aid from the National Treasury, enabled the university, on leaving its ancient site, to enter into the grand group of buildings on Gilmorehill, in which it has happily lived ever since. A few years later the generous gift of 45,000*l.* by the late Marquis of Bute built the hall called after his name, in which we are now met. At the same time the adjoining Randolph Hall and staircase were built by a portion of the legacy left to the university by the late Mr. Randolph. The Queen Margaret College and grounds were presented to the university by Mrs. Elder, who also added largely to the endowment of the engineering professorship, and founded the professorship of naval architecture. Other generous donors have given an engineering laboratory with lecture-rooms, and botanical buildings, and great and much needed extensions in the anatomical department. The Carnegie Trust and the principal's university equipment scheme are at present providing two new buildings; one of these is for extensions in the medical school. The other, in which I naturally take the most personal interest, is for the natural philosophy department, including lecture-rooms and a physical laboratory, all designed and at present being realised under the able direction of my successor in the natural philosophy chair, Prof. Andrew Gray.

In the province of the humanities the working power of the university for instruction and research has been largely augmented during the last fifty years by the foundation of new professorships, conveyancing, English language and literature, Biblical criticism, clinical surgery, clinical medicine, history (in my opinion the most important of all in the literary department), pathology, political economy. In mathematics and in the science of dead matter, professorships of naval architecture and geology; lectureships of electricity, of physics, and of physical chemistry; and demonstratorships and official assistantships in all departments have most usefully extended the range of study, and largely strengthened the working corps for research and instruction. I venture to congratulate the city of Glasgow on having for her god-daughter a university so splendidly equipped and so admirably provided with workers.

ANNIVERSARY MEETING OF THE ROYAL SOCIETY.

THE report of the council of the Royal Society was presented at the anniversary meeting held yesterday, November 30, and the president, Sir William Huggins, K.C.B., F.R.S., delivered the annual address.

The council refers to the second general assembly of the International Association of Academies last Whitsuntide as one of the chief events of the year. At the