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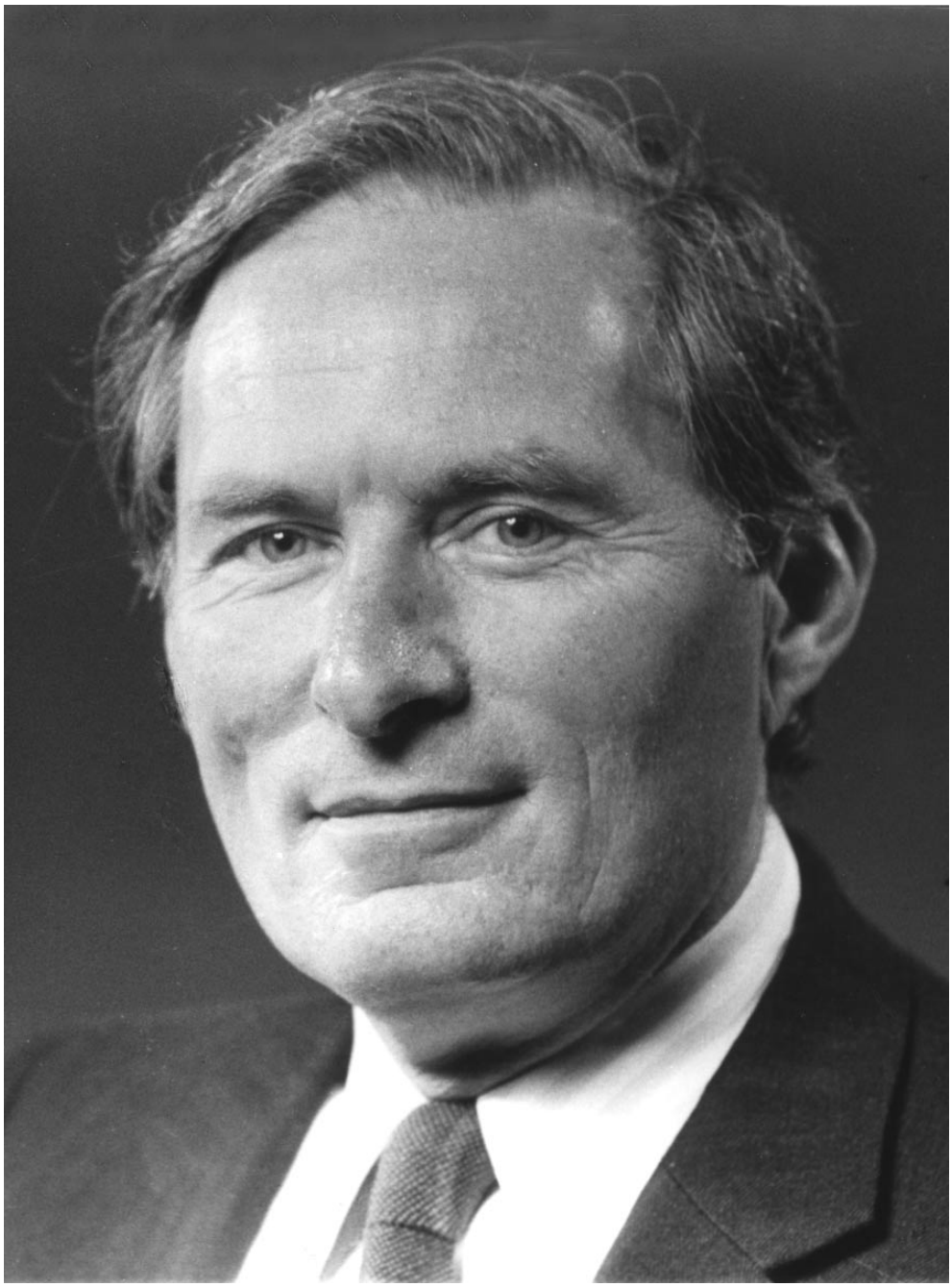

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Elected F.R.S. 1969

BY E. GABATHULER, O.B.E., F.R.S.

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Alexander ('Alec') Walter Merrison was born in Wood Green, London, on 20 March 1924. He was the only child of Henry Walter Merrison, a fitter's mate, who rose to be a service manager in the local Gas Board and a respected Chairman of the Tottenham Group of Hospitals, and of Violet Henrietta Merrison (*née* Mortimer) the daughter of an Ipswich family. Alec attended Tottenham Grammar School, then the Grammar School, Enfield, where he took the Higher School Certificate in physics, chemistry and mathematics. He became Captain of the school and is remembered as a fine scholar with a pleasant manner. His qualities of leadership were already evident at a very young age. He was also a choirboy at All Hallows Church, Wood Green, where his lifelong love of music was first developed.

In 1944 he graduated in physics at King's College, London, when he was just 20 years old, researching radio wave propagation, after which he was 'placed' on wartime radar at the Signals Research Development Establishment at Christchurch, the only Englishman and civilian in a group of 26 engineers of the Polish Army in exile. Two years later he requested a transfer to the Atomic Energy Research Establishment at Harwell to participate in research of a more interesting and challenging nature. There he came under the tutelage of O.R. Frisch (F.R.S. 1948) and J.D. (later Sir John) Cockcroft, F.R.S., who were the leading research scientists in nuclear physics. At that time Harwell was the breeding ground for a generation of British physicists; Alec clearly relished this new environment, helping to equip an electron accelerator to produce short pulses of neutrons. His first published papers described how the new technique could be used to study the interaction of neutrons with matter. This was his first experience of the use of particle accelerators as powerful probes to investigate nuclear matter. The technique of neutron scattering from bulk matter is now an important discipline in its own right, and the genesis of the current world-leading facility (ISIS) at the Rutherford Appleton Laboratory can be traced back to these pioneering experiments in which Alec played a major role.

Whenever he could, Alec went to London to attend a concert, the ballet or the theatre. It

was on one of these visits that he met his first wife Beryl Glencora Le Marquand, the daughter of Frank Bruce Le Marquand, a well-known Jersey brewer. They met in the street, both trying to find the same theatre. They married in 1948 and lived in a 'prefab' at Harwell.

In the meantime Cecil Powell, F.R.S., received the Nobel Prize in 1950 for the discovery of π-mesons in the cosmic radiation. These were the particles which were believed to be responsible for binding together the nucleons in a nucleus. These, too, could be produced in particle accelerators such as the proton cyclotron in Berkeley, California. Alec found the challenge irresistible.

In 1951 he accepted a lectureship at the University of Liverpool, where a synchrocyclotron was under construction. He made a major contribution to the completion and operation of that machine. He was awarded his PhD in 1957 for his first experiments on the interaction of π-mesons with protons and deuterons in nuclear matter. He was now a dedicated experimental particle physicist and achieved an international reputation through his ability in identifying key measurements that had to be done to confront theory, in designing and building the apparatus to perform these experiments and in making them work. He was a natural leader of the research group and was able to inspire physicists and engineers to work together in a team, recognizing the contribution of each member to the experiment.

He became an inspiring teacher, able to communicate his enthusiasm for physics to his students and colleagues. He took his duties as a personal tutor very seriously and spent long hours chatting to small groups of students about their courses, their ambitions and how he saw the opportunities for young physicists going out into the world and his general philosophy of life. In his own words, he learned 'how enormously educative University education is for the teacher'. He was quite preoccupied at that time with the problems of doing particle physics in a university and argued that university conditions and salaries were not compatible with a professional approach to doing high-energy physics.

About this time, the nations of Europe decided to create an international laboratory so that scientists, engineers and others could come together from European countries and collaborate in large-scale research projects, searching for new ways of acquiring large-scale equipment that was beyond the reach of any one country. An international laboratory of particle physics, the European Organization for Nuclear Research (CERN) was created at Geneva, on the border between France and Switzerland. Liverpool was chosen as a key laboratory to which to send young European physicists to gain experience. Once the CERN laboratory had been completed, Cockcroft urged Alec to accept a three-year appointment to work at CERN. He and Beryl moved to Geneva with their infant sons, Jonathan and Timothy.

CERN was at that time a very exciting and challenging laboratory in which to work. Many of the physicists and engineers who worked there had already gained experience at the Liverpool cyclotron, so Alec found himself working with many friends and colleagues. One of these was Guiseppe Fidecaro, and together they carried out the first experiment giving results that were published from the new cyclotron. CERN was now on the map as an international physics laboratory.

The major experiment that Alec and his team settled on, which consisted of measuring the electron [β] decay mode of the pion, turned out to be a winner. The reason for this was that if there was a *universal* Fermi interaction mediating the weak decays (and all the evidence pointed that way), the theoretical arguments, which were regarded as robust, predicted that this mode of decay should occur in about 0.01% of normal pion decays. However, in spite of an energetic and thoroughly professional search for it at Berkeley, Chicago, Columbia and Liverpool, this

electron decay mode had not been detected. However, by 1958 Alec and his colleagues had found evidence not only for the mode itself but, just as importantly, that the ratio was indeed that predicted by theory. The experiment showed that all the previous attempts gave the wrong answers and confirmed that the weak nuclear force was indeed a universal interaction. Alec and his colleagues derived great pleasure from this important experiment in physics because the technique that they developed and its execution set a new standard in detector technology that is important in CERN experiments to this day. He was awarded the 1961 C.V. Boys Prize of the Institute of Physics for this pioneering work. He also participated in the first experiments performed on the 28 GeV proton synchrotron, commonly referred to as the CERN PS, which remains in operation today as the injector into many of the higher-energy machines.

After three years Alec returned to Liverpool in 1960 as Professor of Experimental Physics at the age of 36. However, the CERN experiments were the last he was ever to perform, because in 1962 he was appointed as the first Director of the Daresbury Laboratory in Cheshire to build a 5 GeV electron synchrotron, which would be used predominantly by the northern universities Glasgow, Lancaster, Liverpool, Manchester and Sheffield for their research.

The construction of this accelerator was a tremendous challenge, bringing together a disparate group of people whose experience came from universities, the Atomic Energy Authority and industry but who had little experience in the area of accelerator construction. However, Alec moulded this group together and provided the crucial leadership, which was necessary to ensure that everyone worked together to solve a wide range of problems.

I joined the laboratory at the end of 1964 to help set up the experimental programme. I had met Alec briefly the year before when he visited Cornell University. It was a very exciting period because we had a relatively free hand and we were not bound by any existing rules or procedures. Every lunchtime Alec would invite a group of us to join him in a walk along the towpath of the Bridgewater Canal, which ran next to the laboratory and was used to provide the cooling water for the accelerator complex. These walks were great fun because many topics ranging from physics to politics were discussed and hotly debated. At one stage, the walks were interrupted as the canal bank was breached and the water poured out into the existing fields. Fortunately it was possible to close off sections of this single-contour canal by the insertion of wooden sleepers. A large brigade of the local Angling Society turned up to net the escaped fish and Alec had to use all his charm and persuasion to convince them that this accident would not happen again. The locals became quite friendly after this occasion because they now realized that these clever engineers and scientists were quite stupid after all.

In spite of such setbacks, the accelerator was finished on time and within budget, and worked immediately. The initial experimental programme involving four large experiments began. The laboratory was opened officially by the Prime Minister, Harold Wilson (F.R.S. 1969; later Baron Wilson of Rievaulx), in June 1967. During the machine's construction and the initial physics phase, it was always possible for any member of staff to interact with Alec, who frequently toured the whole laboratory. His enthusiasm, down-to-earth approach to problems and infectious laughter ensured that everyone enjoyed working under his leadership and was prepared to put in that extra effort to make the project a success.

Alec and Beryl were a hospitable couple and on auspicious occasions would give very enjoyable parties at the laboratory. At Christmas, the family often visited Beryl's parents, who lived in Jersey. On one such occasion in 1968, Beryl tragically died. Alec returned to Daresbury as soon as possible but it was clear that the enthusiasm was no longer there and he

knew that he had to find a different environment in which to work. In any case, his job at Daresbury was completed. He was elected a Fellow of The Royal Society in 1969.

One day he received a telephone call from Professor Cecil Powell inviting him to put his name forward as a candidate for the Vice-Chancellorship of Bristol University. Powell had a high regard for Alec, whom he had met on various committees. Alec accepted the eventual invitation of Bristol University; as he later wrote, 'largely because the universities were in trouble, and I felt very strongly about my debt [to them] and felt that if I could pay that back in some way then I certainly should'. He certainly did, in many and more ways than he could have imagined. When he departed for Bristol University in 1969, he left behind a flourishing laboratory with a healthy physics programme.

Alec did things in his own way, remaining totally unpretentious. These qualities were very much brought home to startled Bristolians when, accompanied by his two sons Jonathan and Timothy, the new Vice-Chancellor arrived from Liverpool at the wheel of three-ton truck containing the family's furniture, which they proceeded to unload at Stuart House, the Vice-Chancellor's residence.

At this time the university was still suffering from the student revolution of 1968 and the effects of the prolonged sit-in by the students. The Senate had set up a committee, the Morrison Committee, which was still sitting at the time Alec was appointed to investigate the causes of the unrest. Bristol was looking for a Vice-Chancellor who was academically outstanding but who was also a tough and able administrator. Alec's record here shows that they had found such a man. One of the recommendations of the Morrison Committee was the creation of a greater spirit of openness in giving non-professorial members of staff and students a more direct involvement in the way in which the university was governed. Alec had no difficulties of principle to overcome because all his previous experience in working with research teams involved the junior members of the group playing a dominant role in the decision-making process.

He was also faced with a situation in which both locally and nationally there was a fashion among students for confrontation on any issue. Indeed, the President of the Student's Union in the year in which Alec arrived said that there was a group of 70 students prepared to sit-in anywhere, at any time, on any issue.

The first test of Alec's abilities came in October 1970 when the university porters and cleaners went on strike on the issue of low pay. The more militant students in the Union quickly took it up and tried to make it an issue concerning the governance of the university. At that time, the university was in difficulty because it had no means of negotiating with its own staff, who did not formally have a trade union branch. There was a deliberate attempt by the students to close the university 'in sympathy'. At the height of the agitation, Alec was invited to appear at a meeting in the Great Hall of the university at which the trade union and student representatives would put their case for the university's closing and he would put the case for the university's staying open. When the Union and the student representatives had spoken, Alec was faced with a very hostile situation but he turned the situation around by a calculated piece of vulgarism. He told the audience that he did not need any socialistically inclined public schoolboys to tell him his duty to the working class. He described himself as a 'ragged-arsed kid from Enfield' and exploited the sense of shock which that caused to make his case for the university's staying open. He received a major ovation when he sat down. It was a display of courage, oratory and diplomatic skill that the university must have felt very fortunate to discover in its new Vice-Chancellor.

Alec instituted a series of monthly lunches with the student leaders that helped him to gain both their confidence and an early knowledge of issues that were of concern. For example, when the issue of confidential files erupted in yet another sit-in in 1972, he challenged the students directly. He told them that, if they would agree that the President of the Student's Union would look at any personal file, he would guarantee to show the President any file he wished that was kept in Senate House. This was agreed and the Student President was conducted around all the offices by Alec with his usual charm and good humour. Alec got on very well with students: they recognized his approachability and knew that he would do his utmost for them and that he could be tough but fair.

During the period of interaction with students on their problems, Alec was building up a much more open form of government with the academic staff in Bristol. He encouraged the development of the Non-Professorial Assembly (NPA) as a focus for some non-professorial opinion, but did not allow it to become some form of voting caucus when representatives of the non-professorial staff were admitted to Senate. He encouraged the NPA to bring forward working papers about matters of university government that were troubling that section of the staff. He established a formal procedure by which the university could address its employees through joint negotiation committees with the trade unions. He believed very strongly in the importance of having contact with all the academic and non-academic staff so that he could hear their views on specific issues. He ensured that, in spite of all his other activities inside and outside Bristol, his door was always open to the leaders of the non-professorial and technical staff.

He took every opportunity of interesting and involving lay members of the Council and its committees in the administration of the university and by doing so strengthened and broadened the contacts between the university and the community outside, to their mutual benefit. Later on, this unquestioned objectivity in the interests of the university and his clarity of thought recommended him to those on the look-out for an independent and unprejudiced point of view.

By the late 1970s, the fashion for sit-ins among students had abated and the Joint Negotiating Committees and the NPA were recognized as a good way forward on matters of governing the university. Alec and some of his senior colleagues continually brought forward ideas for improving the system. He tried to make the criteria for promotion more transparent and also tried to reduce and to rationalize the faculty structure of the university. In this latter endeavour he failed, but the wisdom of what he was trying to do was recognized later and implemented by his successor. When he first arrived at Bristol, he found that nothing could be published until it had been considered by the appropriate committee. This meant that members of the university were not informed on important issues because all committee papers and Senate and Council papers were marked 'confidential'. Alec removed this confidentiality bar, thus ensuring the rapid dissemination of the latest information.

During this period, when there were constant battles about funding levels in all the universities, it was important that the staff had the latest information from the University Grants Committee (UGC) as soon as possible. The main problem was that the university was beginning to move into deficit, which affected teaching and research and the number and quality of new appointments. A great burden fell on all members in the university as they endeavoured to run their departments with a maximum of academic and financial efficiency. The fact that they were informed at an early stage on these issues helped everyone to pull together as a team.

When the severe financial cuts were imposed in 1981, he ordered the publication of the UGC letters virtually on the day that they arrived. It was clear that the cuts would be extremely wounding to the individuals and the departments. His chief concern was to preserve excellence. He was advised to set up a small group of 'three wise men' to produce a plan of action for the university, but he took squarely upon himself the task of deciding what should be done. The plan that he produced applied the financial cuts asymmetrically because it involved the closure of four departments, with comparatively small losses elsewhere. An alternative plan was produced that retained the four departments, substantially reduced in size, and therefore involved larger cuts elsewhere. Finally it was decided to close the Architecture Department, but its closure was a long and painful process. The Faculty of Education also suffered very large cuts, but it was able by ingenious self-financing schemes to mitigate very successfully the losses it would otherwise have suffered.

However, Alec's clear-sighted appraisal of Bristol's situation and the plan that he finally put forward based on that analysis, although considered harsh in some quarters, was supported by most of the staff. This support was obtained by his incisive arguments and the clarity with which he put them forward, all typical of his strong leadership. He was very concerned about the welfare of his staff and explored future arrangements for the displaced staff. He did not stand in the way of imaginative redeployment. His perception of himself as a member of the academic staff was one of his strengths, as a result of which the staff considered him very much on their side. His good humour, sense of fair play and ability to exercise authority without distancing himself from those over whom he exercised it meant that he maintained very good relations with staff and students throughout his period at Bristol. His down-to-earth style was a clear departure from the lofty image of his predecessors. He participated in the undergraduate lectures in physics for several years after his arrival. He also attended Physics Colloquia and gave a very erudite lecture on the conservation laws of mechanics and symmetry principles. He made the effort to get to know students and staff by accepting invitations to attend functions hosted by the Student's Union, Halls of Residence, and so on. He also visited all departments in those early days to meet his staff.

During his period at Bristol there was very little opportunity with all the financial cuts to engage in an exciting new venture such as the construction of a large new department building. In retrospect, this was certainly wise.

In spite of all the cuts, the university still managed to transform itself from one of middle ranking to one of the leading institutions in the UK. This was done by careful husbandry and by nurturing excellence wherever he found it. One of his notable achievements was the new Arts Faculty Complex, which was opened shortly before his retirement. Previously all the Arts departments had been scattered around the precinct and the faculty had had little cohesion. Over the years, the university managed to buy up all but one of a row of very large Victorian houses adjacent to Senate House. An attractive and an imaginative conversion of these houses was performed that enabled the university to bring the whole faculty together along one road. Alec had masterminded this plan, which made an important contribution to the intellectual well-being of the university.

Soon after he arrived in Bristol, Alec met Maureen Barry, a member of the Department of History. He was chairing a committee to nominate a new Chancellor, and Maureen was a non-professorial representative on the committee. The committee also had student representatives and during the discussion of possible candidates the name of Dorothy Hodgkin, F.R.S., arose. Debbie Bostock, the student representative (who incidentally was tutored by Maureen)

pointed out that Dorothy Hodgkin was the first woman O.M. since Florence Nightingale and that Debbie's mother thought that she would be an excellent choice, as indeed she was. Alec often told this story and was delighted that representative democracy could work so well!

Alec and Maureen complemented each other perfectly, and their families and friends were delighted when they married in 1970. However, less than 24 hours into their honeymoon in the Cotswolds they had to return to Bristol. Alec had his leg in plaster, having suffered a badly strained Achilles tendon, and received lots of humorous comments from his colleagues. It was a happy and companionable marriage and produced two charming children, Andria and Benedict.

Alec's greatest pleasure was to entertain *en famille* at Maes-y-Ffyn, where they had a cottage perched on a hillside in the Black Mountains of Wales, or later at Hinton Blewett near Bristol, their permanent home. They entertained many of their friends, and enjoyed good music, good food and good wine in their two homes. Alec was a very able cook and invariably acted as chef on such occasions.

In 1970, Alec was appointed by the Secretary of State for the Environment as Chairman of the Committee of Inquiry into the design and creation of steel box girder bridges. In those days, governments had a touching belief in the capacity of Vice-Chancellors to take charge of delicate enquiries. This was especially true in this case, after the failure of two such bridges: the first one was the bridge over the Cleddau River at Milford Haven and the other was the Yarra Bridge at Melbourne, both designed by the same British company. Subsequently a third bridge collapsed at Koblenz. Indeed, the mighty Severn Bridge itself was threatened with closure as a result of these failures. Alec gathered around him a team whom he knew would approach the problem from first principles as if he were building a new accelerator. He conducted the inquiry with an attention to detail that surprised the engineering profession, but with a light touch that pleased them. The emotive nature of the background to the inquiry and the shock that went through the structural engineering world because of that failure meant that the committee was subject to propaganda pressures of various sorts and also from the government to report quickly, resulting in a danger of making decisions that were too hasty. Alec most effectively protected the members of the committee from undesirable influences of that sort. Within two and half years the committee produced the final report, which was not only able to restore the confidence of Britain's public in its bridge-builders but also gave the UK the lead once more in the field of bridge-building.

It was not plain sailing and the interim report, written largely by two members of his committee, had a mixed reception from the engineers who used it to appraise the 51 bridges of steel box girder construction which existed in Britain at that time. An immediate effect of the interim report was that it produced a new generation of young engineers who became experts in box girder bridge assessment and design. Although some strengthening was needed for the bridges, the amount of additional steel used was typically less than 2% of the original bridge weight. Obviously, bridge builders were worried that the increased cost associated with steel box girder bridge construction would lead to the discontinuation of that particular form of bridge. At that critical stage of the work, Alec played an invaluable part in reassuring the government, the Civil Service and the public that all was well and that, in his own words, 'the steel box girder was a really splendid way of building bridges, … as none of the work of the committee had revealed any fundamental weakness of the concept'. In the period between the issue of the interim report and the final report, the most remarkable research programme ever mounted within the UK university system in the field of civil engineering was initiated by the Merrison Committee to clarify many issues that had not been fully understood.

Alec used his experience with the construction of large accelerators to ensure that the analytic design and the necessary calculations were properly implemented by his committee. A set of appraisal rules for assessing the adequacy of existing box girder bridges was handed down and used as a basis for the design rules for future projects. At the beginning of the 1990s there was a renaissance in steel construction within the UK. There is little doubt that one of the major factors contributing to Britain's leadership in the field of steel design and construction was the 'spring cleaning' that Alec and his committee performed on the system of codification for structural design in the early 1970s. His ability to conduct a penetrating analysis of complex issues is well illustrated by an unpublished report that he wrote for the Secretary of State for Energy on the future of and the need for nuclear energy.

In the spring of 1976, Alec accepted a more difficult and exacting responsibility in the field of health care. The government of the day decided to set up a Royal Commission with wide terms of reference to investigate a difficult range of problems affecting the National Health Service (NHS), including its organization, management and financing.

The turbulence both within and outside the NHS arising from general strained relations between government and doctors and from the specific issue of pay beds and private medicine made the choice of Chairman particularly difficult. Alec had already chaired an inquiry a few years earlier into the regulation of the medical profession. The report was of lasting value because it settled the future issues of the General Medical Council (GMC) for many years to come and led to the restructuring of the whole of medical education. Almost all its recommendations were embodied in the Medical Act, with the notable exception of the proposed reforms of the undergraduate medical course. He also took a deep interest in the problems of re-employing women medical graduates with families. It was a tribute to his personal integrity, authority and skill as Chairman that he was the first choice of both the British Medical Association and the trade unions when there were informal soundings about the chairmanship of the NHS Royal Commission. The report took just over three years to complete, and its 500 pages provided an extraordinarily detailed snapshot of the NHS and its structures, ethos and problems of the late 1970s. His diagnosis of the ills of the NHS was, as subsequent events have shown, essentially correct. The treatment prescribed was also correct but the incoming government failed to accept the message of the report, apart from somewhat streamlining of the system by abolishing Health Authorities. However, the report's recommendations received a wide measure of support in the community and many of them have since been gradually incorporated into the evolution of the NHS.

From his days as a choirboy at All Hallows Church, Wood Green, Alec developed an interest in music and theatre. During his period at Harwell he was an active member of the Dramatic Society. He had an extraordinary memory for plays and performances that he had seen. It therefore came as no surprise when he was appointed a Governor of the Bristol Old Vic Theatre Company in 1969, soon after arriving in Bristol University. He became its Chairman in 1971, during the period of the redevelopment of the theatre, and helped considerably in negotiations that enabled the main building work to be completed and the theatre to be reopened at the beginning of 1972 with a great deal of work still to be done. After a closure of 20 months, there was inevitably an initial period of uncertainty, but under Alec's sure and firm guidance, everything was completed by the end of the decade.

During the 1980s it would have been reasonable to expect that the Bristol Old Vic's affairs would continue to run smoothly, but this did not happen because of the recalcitrant attitude of the various local funding agencies involved. He realized that the theatre was in trouble finan-

cially because of changing views in the Arts Council. Alec believed that he could help by using his contacts to increase local government funding and to encourage sponsorship and industrial support. He was very upset when he was removed as Chairman along with other long-term servants of the theatre. He held the Old Vic in very high regard and was more concerned that it should retain its reputation for excellence than the fact that his chairmanship was terminated for political reasons at such a crucial period in its history.

Alec maintained a strong interest in CERN from his early days as a staff member there in the 1950s. In 1969 he was appointed a member of the Scientific Policy Committee of CERN for three years, enabling him to maintain a close interest in the scientific programme and the development of the laboratory. It is a tradition that past members of the Scientific Policy Committee can attend a meeting of that body once per year. He took full advantage of this opportunity, which enabled him to keep in touch with former colleagues and the continuing scientific programme. He greatly enjoyed this opportunity to have a break from running a large university.

In 1982, he was appointed as President of the CERN Council, which is responsible to the Member States of CERN for its overall operation and is made up of delegates appointed by them. He was liked as President because, unlike some national appointments, he was not considered to be an agent for the British Government but had a genuine degree of independence. He was valued and respected because he combined the competence of a physicist who had done important experiments at CERN in his earlier days with an ability to handle complicated problems in a body such as the CERN Council. His tact, fairness and common sense combined with his remarkable sense of humour made it possible for the Council to solve difficult problems.

During his period as President, it was essential to achieve authorization for the proton–antiproton improvement programme, which provided an upgrade to the existing programme that discovered the intermediate vector bosons. It was a very important scientific asset for CERN to boost the intensity of antiprotons. Discussions required many sessions extending into the night to achieve special financial arrangements and Alec played a crucial role in guiding and obtaining the agreement of the Member States. He also had a key role in getting Spain to re-join CERN, which it had previously left in the late 1960s. He chaired in a masterly way the 30th Anniversary of CERN in the presence of the King of Spain.

Throughout his career, Alec did all he could to support British membership of CERN. There were periods when he interacted with British ministers to support CERN when the government of the day was considering the withdrawal of the UK from CERN. He was the first to point out that although the UK was well endowed with local accelerators such as Nimrod (proton) and Nina (electron), it was important for the future of the subject that UK groups started to use CERN. This did happen in the 1970s.

He was knighted in 1976. In spite of his numerous responsibilities at both national and international level, he never lost sight of the fact that he was both the chief executive and academic leader of his university. He also played a full major part in the Committee of Vice-Chancellors and Principals, on which he always insisted that usefulness must be subservient to excellence in academic judgement. He was its Chairman in the period 1979–81 and had to deal with the government's new policy of high fees for overseas students, which he strongly opposed as short sighted and likely to benefit the USA. Simultaneously he became Chairman of the Advisory Board for the Research Councils (1979–83), on which he supervised the planning of the nation's basic research in the universities and Research Council laboratories. He

was a devoted European but never forgot the abiding value of the Commonwealth. He became Chairman of the Council of the Association of Commonwealth Universities (1982–83) and was elected President of the Institute of Physics in the period 1984–86. In his Presidential Address to the Institute of Physics in 1985 he stated, 'I believe the strength of our subject [Physics] and those who practise it is such that it will see us through to a tomorrow in which it will be a privilege to live', reflecting very much his optimism and his belief in young people.

In 1982, Alec announced that he would retire from the University of Bristol two years later, at the age of 60. On taking up the Bristol appointment he had given an undertaking that he would stay for 10 years. However, he found the work constantly interesting because he enjoyed the challenges of dealing with people both inside and outside the university, and remained its Vice-Chancellor for 15 years. By this time he was a highly respected Bristolian in his own right. In addition to his long connection with the Bristol Old Vic (1971–87) he was a director of the Bristol *Evening Post* (1979–89) and a director of the Bristol Waterworks Company from 1984. For family reasons he wished to stay in or around Bristol and so refused tempting job offers from elsewhere. However, potential financial problems (for he still had a young family) were greatly reduced by his appointment as Regional Chairman and later a main board member of Lloyds Bank. He also served as Chairman of the Western Provident Association.

He was appointed Deputy Lieutenant of the County of Avon in 1974 and served as High Sheriff in 1986–87. Judges on circuit sometimes lead rather lonely lives and rely heavily on the Sheriffs to make contact with the local community. Alec excelled in these respects, and he and Maureen were very popular with all the judges on the Western Circuit.

He was Chairman of the Selection Committee for Harkness Fellowships, President of the Bristol Rugby Club—having enjoyed playing in his younger days—and a member of the Board of Governors at Bristol Royal Infirmary as well as a member of the Regional Health Authority. He was Chairman of the Universities Superannuation Scheme, safeguarding the pension of his former colleagues. Far from being a passive trustee as Chairman, he used his deep understanding of figures, statistics and data to check and recheck personally the actuarial assumptions, to ensure that the fund of (then) £5 billion could support the pensioners and academic widows and that they were never likely, as he put it, 'to live out of dustbins'.

Alec had great affection for The Royal Society and was much moved by its history and the scholarly atmosphere that was central to its traditions. His nomination by Council to the post of Treasurer in the summer of 1986 gave him great pleasure, but after his first operation for a cerebral tumour he withdrew his name for formal election by the Fellowship. He had looked forward to working with many of his old friends, including Sir George (later Lord) Porter (P.R.S. 1985–90) and Tony (later Sir Anthony) Epstein, F.R.S.

In fact, his health had been failing for some time. He bore it all with courage and never complained, but marvelled at the wonders of modern science. He carried on as though there was so much to do and little time in which to do it. There was a sudden recurrence of his illness and he died in Bristol on 19 February 1989.

Alec Merrison was a great man who never forgot his humble origins. He was an outstanding scientist and a first-class administrator who believed strongly in the pursuit of excellence. He had a kind nature and a superb sense of humour.

Honours and awards

1944 BSc, King's College, London
1947 PhD, University of Liverpool
1951 Leverhulme Fellow, University of Liverpool
1961 Charles Vernon Boys Prize (Institute of Physics)
1969 F.R.S.
1970 F.R.S.A.
1971 Hon. LLD., University of Bristol
1972 F.K.C.
1976 Hon. DSc, University of Ulster
Knighthood
1977 Hon. DSc, University of Bath
1980 Hon. DSc, University of Southampton
Hon. F.F.C.M.
1981 Hon. F.I.Str.E.
Hon. DSc, University of Leeds
1982 Hon. DSc, University of Liverpool
Member of Haberdasher's Company
Freeman, City of London
1986 High Sheriff of Avon

Acknowledgements

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