

Interviewee: Professor Andrew Miller  
Dates: 1994-2001  
Role(s): University Principal



## Interview summary:

### *Summary of content; with time (min:secs)*

**Start** Andrew Miller (AM) begins by explaining that he got to know the first Principal of the University of Stirling when he was a graduate student at Edinburgh and Tom Cottell (TC) replaced Professor Kendall when he retired as Professor of Chemistry. TC was only 34 and straight from ICI with lots of new ideas about how Chemistry should be taught. He recalls TC's sports jacket with leather on the elbows. TC talked to AM to learn about his research. Computers were just being introduced and later, when AM needed to use a computer for his work on the 3-dimensional structure of collagen and Vitamin B, TC and AM went together to Glasgow University to learn how to programme computers. Those were the days of using cards and AM recalls TC making a mistake and tearing up his cards, using words not to be repeated. They got to know each other very well. AM much appreciated TC as he brought a new approach to the department.

**02.42** Speaking about his own academic career, AM explains that after 2 years preparing his doctorate at Edinburgh, he was offered his first job as an assistant lecturer by TC. He then spent 2 years teaching chemistry in Edinburgh and finishing his PhD. He then saw post-doctoral fellowships advertised at the CSI, Commonwealth Research Institute in Melbourne. He applied and was appointed by Bruce Fraser (BF). So, in August 1962 he graduated PhD, married Rosemary and went to Australia. The Australian recommended they travel by sea, on what was their honeymoon, by going out to France and then taking a ship from Genoa. Thus, they avoided the Bay of Biscay and spent some time in France, the Alps and Switzerland. AM recalls that they then spent 4 weeks travelling on to Australia. En route they visited Naples and Pompeii, Messina in Sicily, and from Port Said went by coach to visit Cairo and the Pyramids. The ship meanwhile entered the Suez Canal and the passengers travelled by night across the desert to meet up with it at the end of the canal. They then sailed in the Red Sea and saw the Southern Cross.

**07.23** AM's job was with the government Scientific and Research Institute and Rosemary got a job at Melbourne University with the Reader in Civil Engineering. Both worked there for three years. AM's job was to start applying computers for the first time to biological fibres, like collagen, muscle and keratin. It went well. He worked with BF as his supervisor who had worked with Rosalind Franklin in King's College, London. Bruce Fraser also knew Morris Wilkins and is mentioned by Watson and Crick in their first paper on the double helix because he put forward a theory of a helix structure for DNA, but 3 stranded, not 2 stranded like the

double helix. AM worked with BF on how many strands there were in ropes of keratin. They thought then 3 but BF and AM showed there were 2. After 18 months AM was able to choose to work on muscle proteins, boromyosin and tropomyosin. At the end of 3 years AM contacted Professor of Natural Philosophy at Edinburgh, Bill Cochran, to enquire about a lectureship. No lectureship was available but he was offered instead an ICI fellowship. AM decided to write instead to a top laboratory. He contacted Max Perutz, by that time a Nobel prizewinner for his work on the molecular structure of haemoglobin and Director of the Medical Research Council Laboratory for Microbiology at Cambridge. AM was surprised to quickly be offered a staff position. He later learned that a man called Ken Holmes (KH) had been reading his research publications from Australia and recommended him to Max Perutz. When AM met KH he learned from him that Holmes had been offered two very good jobs – Director of the Max Planck Institute in Heidelberg or with David Phillips as a lecturer in the new department of Molecular Biophysics at Oxford. KH accepted the Heidelberg post and AM was offered the job in Oxford by David Phillips. AM remarks that this is so different from the position people find themselves in today, who often struggle to get positions after doing much work.

**11.58** AM then spent 17 years in Oxford working on how muscles contract, using X-ray pictures. AM had a very good PhD student called John Ray who worked on collagen, using the same X-ray techniques, and with very good results. During this time AM published around 180 papers, in Nature, for example. It was an exciting time. At the same time, Sir John Kendrew was working in Cambridge and came to assess the laboratory, where AM gave a talk. Soon afterwards, Sir John wrote to tell AM he was starting a new laboratory in Grenoble, with a nuclear reactor that produced a neutron beam. He asked AM if he would be willing to go there and develop biology beside the nuclear reactor. AM got permission from his boss, David Phillips, later Lord Phillips and the family went off to Grenoble for 5 years.

**14.55** It was a big change, especially for the children, then aged 6 and 8. They had a trying time at school because of not speaking French. Now they look back on that time with happiness and both are good linguists. Neither AM nor Rosemary spoke French. AM at that time did not believe in putting effort into learning languages, something he later decided was wrong to not take account of meeting people, cultures and society. So, he learned French at that point by listening and copying, even if not sure how to write. English was the working language in the laboratory, but many technicians and others couldn't speak English, so AM had to use French with them. Rosemary, in Oxford, had been doing work for an Arabic Studies lecturer, typing out transcribed Arabic script so that it could be put on computer. In Grenoble, she was contacted by the Administrative Director of EMBL (European Molecular Biology Laboratory) who was based in Heidelberg, who asked her to set up the new office while they advertised for a multilingual person. Rosemary got the office going and was, more recently, listed among a list of alumni published by EMBL because of the part she played. Later a Dutch woman was appointed and Rosemary helped with research publications and so on. They lived about 7 miles from Grenoble at 60 metres, beside a farm, which the children really enjoyed. It was a different way of life. Here AM tells an anecdote about travelling into France with a thermos flask of rats' tails for his collagen experiments and interaction with a border guard to underline the different lifestyle.

**20.57** After 5 years the family returned to Oxford, and then Edinburgh. The children completed their education in the UK, at schools in Oxford and Edinburgh. Lisa went on to do A-Levels whereas Steven, who was interested in film and media left school early and made two advertisements for Grampian television. He then went to Napier University to do a degree in Film, Media and Photography. On graduation he went straight into a job and has worked in Hong Kong, Singapore, America and has been in London in recent years. He has been involved in setting up a new Turkish radio and television channel in English for 24 hour news. Lisa had intended to study English, French and History of Art, but a spell in hospital caused her to decide to become a nurse. She trained as a nurse at St Mary's, Paddington, then moved to Edinburgh and did midwifery and is now a health visitor in Edinburgh.

**24.50** After a couple of happy years in Oxford AM and Rosemary were considering whether to make a move elsewhere, but only Cambridge or Edinburgh appealed sufficiently to leave Oxford. A job as Professor of Biochemistry was advertised in Edinburgh. Although biochemistry was not AM's field, it was a time when subject areas were generalising and techniques were being applied across wider areas. AM got the job and spent 10 years in Edinburgh. He became a vice principal in Edinburgh looking after computer science, research in the libraries. AM applied for the principalship at Stirling and was appointed. AM was very pleased, particularly because of the Tom Cottrell connection. He had spoken to Tom Cottrell when he was setting up

Stirling and knew about TC's aims of broadening education and trying to be innovative. AM had visited the university and knew there were some very clever people there, like Professor Kleinpoppen, really interesting scientists and the Aquaculture Institute which AM considers as world-class. Randolph Richards of Aquaculture was the first to get a Grade 5 in the Research Assessment Exercise. AM enjoyed going round the departments and talking to staff about what they were doing. Interaction between different subjects took place and that was a feature of Stirling. AM gives as example a professor, a mathematician, working together with a biologist who wanted to work on epidemiology and animals, but needed a mathematician. They produced excellent publications.

**30.06** Asked about his aims at Stirling, including this sort of merging and flexibility already mentioned, AM also mentions a personal project of importance to him. A research student of his, Tim West, came to Stirling as a Reader and they continued work on a joint project. AM was busy running the university so was pleased to have collaboration to continue the project. They eventually published a paper which solved the structure of the collagen molecule arrangement without having to go to models. AM had hoped that science would come along more strongly at Stirling than it did. Environmental Science was very good, with Keith Smith. Coincidentally, a programme on TV recently had featured an environmentalist from Stirling who had worked with the historians to establish where the Battle of Bannockburn had been fought which was an example of the type of crossover AM had fostered at the University.

**31.50** Asked about bad moments, AM recalled that the challenges were mainly to do with people and could be very difficult. One of the worst things to happen was the Dunblane killing when a member of staff, of Biochemistry lost his daughter. He retired and since has worked with the anti-gun lobby in this country. AM also recalls receiving a phone call to say a student had meningitis. Thereafter, AM consulted health staff about meningitis and started students vaccinations. AM explains why students are particularly vulnerable to meningitis and how vaccination prevents some cases. On that occasion, two students died and one recovered. Speaking to parents was very difficult.

**34.40** The low parts academically were, for example, closing certain departments, such as Arabic Studies. There were significant academic successes and Stirling was ranked 30<sup>th</sup> in the UK in The Times Higher Education league table. It is now 54<sup>th</sup> or thereabouts. AM would have liked to be in the 20s. That was 1996 and things were going well. Vicky Bruce (VB) was Research Vice Principal and she, Christine Hallett and Sally Brown worked very hard for the Research Assessment Exercise of 2001. AM left before the results were in and got a call from Colin Bell to tell him that the University had gained a grade 5 rating in 10 out of 20 departments. Much of this success AM attributes to VB and her team of women. VB ran mock exercises and made sure everything was happening properly. AM recalls a photo taken just before he left the University in 2001 of the Chancellor, Diana Rigg, the Chair of the Court, Doris Littlejohn and the three Vice Principals, Vicky Bruce, Sally Brown and Christine Hallett and himself as Principal. AM jokes that a good title for the photo would be the 'Token man at Stirling' or 'Glass ceiling shattered'.

**38.45** AM recalls the physical changes on campus and the success in raising money to refurbish and build new parts of the university. AM mentions particularly his admiration for Donald Weir's contribution. He had a plan to refurbish the residences one by one. The idea was to give new students a choice between ensuite or something cheaper. AM would have liked an on-site heating system but he failed in his attempt to get that accepted. He is very pleased that he achieved the refurbishment of the Macrobert for which he got lots of help from Diana Rigg, particularly when she put on a very successful theatre evening about her book, 'No Turn Unstoned'. AM talks of the contribution of Giles Duff as fundraiser and public relations person for the University. He tidied up the graduation ceremonies and knew how to raise money. AM also talks of the contribution of the late Mike Jackson who was a wonderful colleague, very supportive, and could well have been a Principal at some point. AM recalls going with Mike to Liverpool to meet the boss of Littlewoods Pools to discuss funding, which was obtained. Mike Jackson and Giles Duff were key in getting funding. Funding the swimming pool was also important and nowadays Stirling is very well known for its swimmers, including medal winners, and also for football. At the time, Stirling was well-known for sports, but it was hard to get government money. The Macrobert Trust was very generous and gave the University quite a lot of money. The Macrobert Trust was set up in memory of the 4 sons of the Macrobert family, lost in the war. Sport Studies is now very important to Stirling and is associated with Stirling throughout Scotland.

**45.00** AM is asked about his retirement. Since he retired 17 years ago, he was asked to be Chair of Cancer Research UK, a merger of two powerful cancer charities where someone independent was needed as they merged. AM mentions important figures in the charities, such as Gordon McVie who was a brilliant publicist and popularizer for the cancer campaigns and Paul Nurse who had won the Nobel Prize, and whom AM recommended to the Chairperson of the charity as the next Director.

**47.20** AM mentions that Paul Nurse had written in the previous day's Times making strong points against Brexit, for example, the consequences for the Erasmus scheme and the Horizon 2020 research scheme. Anton Muscatelli, Principal of Glasgow University, had also just given a speech underlining the negative effects Brexit would have on universities and education. AM mentions his concern about leaving Euratom which is for security and safety in the areas of radioactive and nuclear developments. However, in spite of these efforts, AM is not optimistic that Brexit can be avoided.

**49.11** AM also took on a role at the Open University in 2001 when he was asked by Stuart Monroe, Head of Dynamic Earth in Edinburgh, to join the Court. AM was thrilled due to the connection with Jenny Lee and Beith High School in Fife. He joined at the same time as the new Principal, a South African, and served for 4 years. He also was invited by John Krebs, whom he had known in the Zoology Department at Oxford, to join the Food Standards Advisory Committee. John Krebs insisted on becoming chairman, that all the meetings of the board had to be held in public and that all decisions be made public. However, when John Krebs finished his time as chair, everything went back into government. AM returns to Stirling for events, such as the recent dinner which had been held for James Naughtie when he finished his time as Chancellor. AM sums up by saying Stirling was a wonderful experience, living on that campus for 7 years was a delight. He was full of admiration for the academic performance of the people when he was there. They made many friends and he still enjoys keeping in touch with them.

Ends

<b>Interview No:</b>	SURSA OH / -	<b>SURSA</b> <b>University of Stirling</b> <b>Stirling</b> <b>FK9 4LA</b>  <a href="mailto:info@sursa.org.uk">info@sursa.org.uk</a> <a href="http://www.sursa.org.uk">www.sursa.org.uk</a>	
<b>Interviewed by:</b>	Angela Smith		
<b>Date of interview:</b>	23 November 2018		
<b>Summary completed by:</b>	Moirra Ball		
<b>Date:</b>	11 March 2024		