



# Professor R. Angus Buchanan OBE

*Interview by William Hanna*

*My wife and I first met Angus and Brenda Buchanan in 1966. They were hosts at a University of Bath function for new Honorary Graduates, of whom my mother was one. Since then we have met regularly at history based events, for - dare I use the phrase - kitchen suppers, and as members of a winning team in a Holburne Museum quiz. Within the overall context of the interview I wanted to bring out particularly the national and international contribution Angus has made to the history of technology. He has been a patient interlocutor; any errors are mine.*

**WH.** *Yours is a 'history family'; you and Brenda [Dr Brenda J. Buchanan] and your two sons all have PhDs in historical subjects, but you have different interests?*

**AB.** Yes. Brenda as an economic historian has, amongst many other interests, edited two volumes on the History of the Technology of Gunpowder; Tom, at Oxford, has written on the impact of the Spanish Civil War on Britain, and is about to publish on China and the British Left, while Andrew, who also read history at Oxford but has been in computerised engineering, gained his PhD in 2011 and now lectures in global and military history at the University of Vermont. Both boys attended Beechen Cliff School in Bath. We've never formally collaborated on any scholarly subject, but mutual support has been of great value.

**WH.** *In your own background you have family links with Scotland, Yorkshire and Gloucestershire?*

**AB.** That's right. My paternal grandfather was born in Dumfries, and worked there as an agricultural labourer. He moved south some time about 1890 and established a business in Huddersfield. My father was born there and he and his brothers all received a share in the family business. My father moved to Doncaster and that's where he met my mother who was a Gloucestershire girl; her family came from around Stroud. She was a school teacher; teaching jobs were scarce in the south and she moved north to Doncaster. My parents settled in Sheffield where I was born in 1930 in a nursing home on the very edge of the city just on the right side of the border with Derbyshire, so I'm a Yorkshireman.

**WH.** *You went to school in Sheffield?*

**AB.** Yes, High Storrs Grammar School, about 4 miles from where I lived, across the western suburbs; you went up and down up to get there so I got into the habit of walking and haven't lost it [fig. 1]. It started as a central city school at the beginning of the century, which then moved into the western outskirts in a new school - a very nice art deco building on a farm called 'High Storrs'. There were two quite distinct schools, separate but adjoining, for the boys and the girls. We didn't meet until the sixth form, when there was an Inter Sixth Form Club. Brenda and I met on an Inter-Sixth Form hike over the moors. She had only joined the school in the Sixth Form. She lived at the other end of the city in the eastern industrial part. You have to remember that Sheffield was heavily bombed during the war and Brenda's father was very anxious about her crossing the city to get to school, so she didn't transfer to High Storrs until after her School Certificate.

**Facing:** Angus, contemplative in a city square, while attending the ICOHTEC Symposium in Prague, 2000.

*Author's Collection*

*WH. Did you begin to concentrate on history at High Storrs?*

**AB.** Yes, I found that I was a complete duffer at languages, and not very good at maths - which was a pity. I always had a hankering to be an astronomer - and the two subjects I did well at were history and geography. I concentrated on history in the Sixth Form, where our teacher was Mr. Hamilton - he advised us "you should read big books" in the library. So we did, and it was a good habit to get into. I did well at Higher School Certificate and got an offer from St.



**fig 1: Angus and Brenda on the summit of Whiteface Mountain in the Adirondacks, New York State, 2011**

*Author's Collection*

I was posted to FARELF - the Far Eastern Land Forces. For an eighteen year old the journey was memorable. We were on an old British India Steam Navigation Company ship which was very crowded, but discipline was relaxed. Because there was little room there wasn't much the Army could do with you - physical jerks in the morning and hymns on Sunday. But you could read - there was a good library on the ship. And we stopped at Gibraltar, Port Said, Aden and Colombo, with a chance to go ashore and look around, all quite leisurely. Coming back was a bit different, the 'Devonshire' was a faster vessel, and there wasn't any time ashore. That didn't matter as our minds were very much on demob. So it was back to Liverpool, straight to Aldershot and I was demobbed on the spot and that was the end of my Army service. There are good memories of those days; I made a lot of friends, one of whom became my Best Man and I'm still in touch with him.

*WH. So then it was Cambridge; history and Judo?*

**AB.** St Catharine's was well known for rugby and geography. Neither was for me, but I did represent the University at Judo and was awarded a half blue in the sport. History was under Professor Rich, who later became Master. He recruited someone to do the basic tutoring, Oliver MacDonagh, who had been at Trinity College, Dublin. The undergraduates were paired up and my pair was tutored by MacDonagh for three years.

Catharine's College, Cambridge of a Commoner's place two years ahead on the understanding that I would do my military service first. I was subsequently made a Scholar of the College on the strength of my performance in the History Tripos.

*WH. How did you find National Service - you were in the Army and went to the Far East?*

**AB.** I wasn't looking forward to it. I was against conscription, I didn't want to be told what to do, I had a feeling of 'we've won the war and ought to be able to do what we want', but I was called up for eighteen months into the Royal Army Ordnance Corps as a clerk.

WH. He wrote on Victorian government, I think?

AB. Yes, and on Irish history, and biographies of Irish politicians. He also developed a theory that changes in government and society around the 1830s and 1840s were not the result of ideological preparation by, for example, Jeremy Bentham and J.S. Mill, but rather that historical change came about fortuitously as people re-acted to what they saw about them. I thought that was ungenerous to the thinkers. But he was a very good tutor, I did well in the History Tripos and was invited to research for a PhD.

WH. What was your research topic?

AB. As a social historian I chose to work on 'Non-Conformity and the Labour Movement'. That was too broad and I narrowed it down to 'Trade Unions and Public Opinion 1850-75'.

WH. You completed your PhD after leaving St Catharine's while you were working in Stepney?

AB. Yes, I was invited to join The Royal Foundation of St. Katharine in Stepney which engaged in adult education and social work and was a centre for study and conferences. It was an idealistic choice which derived from my encounter through Brenda with the Sheffield Industrial Mission in which we had both been very involved.

WH. Would you like to say something about the Mission?

AB. The Industrial Mission had been set up in 1944 by The Bishop of Sheffield, Leslie Hunter who had very strong ideas about getting the church involved in the community and especially to improve the engagement of the church with the working people of the city. His key appointment was Ted Wickham who as Industrial Chaplain visited the big steel works and other factories and had meetings and discussions. The Mission was very successful, and at one time was in touch with many of the industrial workers in its area. We had visiting speakers too - one was Father John Groser,

a powerful, charismatic parish priest from Poplar, who was involved with St Katharine's, so I met him again there. Unfortunately, Ted Wickham left to become Suffragan Bishop of Middleton and when Leslie Hunter retired his successor as Bishop disapproved of the Mission's approach and it went downhill rapidly. Another interest Brenda and I shared was the Iona Community that we visited for the first time in 1952, staying in a Youth Camp. It was run by the Revd. George MacLeod who had been a parish priest in Govan. He founded the Community in 1938 in an attempt - rather like the Sheffield Mission later - to close the gap he saw between the church and working people. The Community rebuilt the Abbey on Iona as an ecumenical place of study and contemplation. It was another place which influenced the choice of working at St. Katharine's.



fig 2: The founders of Industrial Archaeology at the Bath Conference in 1967. l-r Neil Cossens, Michael Rix, Angus Buchanan, Frank Atkinson, Robert Vogel and Marie Nisser

*Author's Collection*

*WH.* You mentioned Father John Groser earlier. He seems to have been quite a controversial figure: against the advice of his Bishop he left his parish to become a Chaplain to the Forces in the Great War - and very much a front line Chaplain, decorated with the Military Cross for staying with wounded soldiers under fire. When he returned to his parish in Poplar he was seen by some as 'that turbulent priest'?

*AB.* Yes, he was certainly turbulent in the 1930s. He was devoted to his parishioners and to East London as a whole: he led rent strikes, and took part in the Cable Street troubles, with Mosley and his supporters coming up from one end and the people from Poplar coming from the other. He moved to a parish in Stepney and was invited to revive the Foundation, which had been founded near the Tower in the twelfth century.

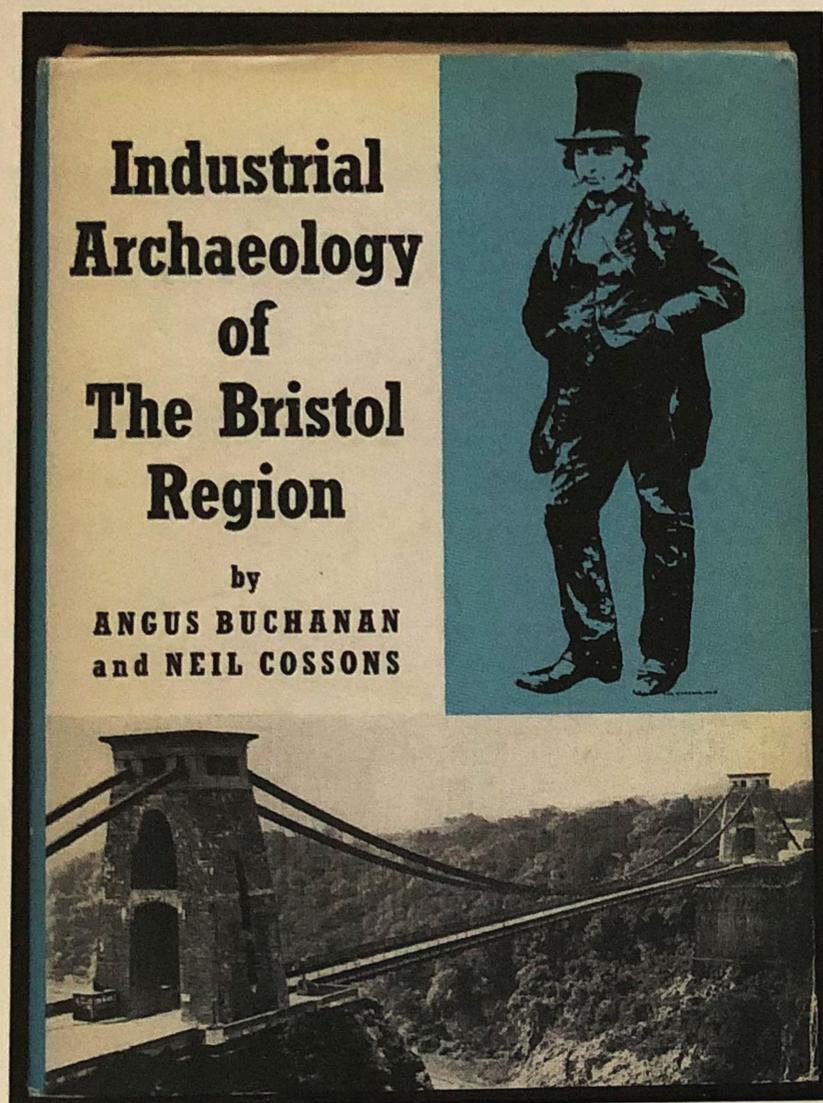


fig 3: The cover of *Industrial Archaeology of The Bristol Region*, published 1969  
*Author's Collection*

*WH.* What was your role at St Katharine's?

*AB.* I was the Adult Education Officer. We ran courses for apprentices, who would come for a week to courses that I set up. We needed to get permission for them to come, so I had a lot of leg work going round firms to get them to release their young people. It was good training for me and I think the young men and women enjoyed it. That was what took most of the time. There was also an evening class for the Workers Educational Association (WEA). and some extra-mural university work as well. On top of all this in 1958 I was co-opted to the London County Council Education Committee with which I had two very interesting years, until we left Stepney in 1960.

*WH.* During that time you were a governor of Risinghill School which one part of the educational establishment regarded as 'the blackboard jungle' and another part as the exemplar of what comprehensive education could attain?

*AB.* Yes. The Headmaster was Michael Duane. We had a difficult job to get him through the appointment committee. Officers had drawn up a short list. Several of us thought Michael Duane was outstanding, a most remarkable man, but he had said "I don't believe in corporal punishment". Some of the committee were horrified at this - 'how can you run a school like this without corporal punishment?' However, we managed to get the appointment made, and Duane set up the school and ran it without using any corporal punishment - if pupils broke the rules he would give them a good talking to and would think up ingenious punishments. For a year I was in close contact with him. The school worked very well, but in four or five years or so those who had opposed the appointment persuaded the committee that it was no

good and they had to get rid of him. There was no way of doing that directly, so the school was closed and Duane was moved sideways to another post. He never got another headship.

*WH. By then you had moved to Bristol?*

*AB. Yes, in 1960 I began my association with the College which was to become the University of Bath.*

*WH. How did that begin and progress?*

*AB. I was appointed to the Bristol College of Science and Technology which in 1960 had just been designated a College of Advanced Technology - a CAT. Our Principal was George Moore, a Bathonian who had put a case very effectively to the committee that was deciding which colleges should be designated CATs, offering the Diploma in Technology. A requirement of the Dip.Tech. was that one tenth of the course should be devoted to non-core subjects, the humanities, languages, economics, history. So a Head of a Department of General Studies was appointed and recruited staff, which included me as Assistant Lecturer in Social and Economic History.*

*WH. You also continued with WEA work?*

*AB. Yes, at the Bristol Folk House. It was the oldest Further Education establishment in the city and had been set up in 1870 in the docklands to give opportunities to workers in that industry. The Folk House was a real centre of activity and provided facilities for evening classes for the WEA and the University Extra-Mural Department. I taught a WEA class in Social and Economic history, and worked up a syllabus for a course on the history of technology. One of the people who came into the group was Neil Cossons [fig. 2], then the new Curator of Technology at Bristol Museum. Over the next four years Neil was very active; among other things he acquired an engine from the Old Mills Colliery in Radstock. It was a big engine, and Neil had to get a crane to take the roof off the engine house. Then it was too big to transport, so Neil took it in parts to an old warehouse in Bristol. It was supposed to go into a new museum building - but that never materialised. Instead an old shed on the dockside was reconditioned and that is now the Industrial Museum, recently re-opened as 'M' Shed.*



**fig 4: The cover of The Industrial Archaeology of Bath, published 1969**  
*Author's Collection*

WH. You and Neil Cossons set up the Bristol Industrial Archaeological Society (BIAS)?

AB. Yes, it grew out of my Folk House class and we had great help from the University Extra-Mural Department who supported us with good speakers. One of the features of Industrial Archaeology (I.A.) is that it is an inter-disciplinary subject and all sorts of people can make contributions. BIAS had a lot of young members, so the families went on site visits - there was quite a holiday atmosphere which was not entirely approved of by the more severe historians. But the Society was very successful, so Neil and I went on to seek wider support for I.A., establishing the national Association for Industrial Archaeology (AIA) in 1973, of which I became the President and, in more recent years, the Honorary President. We went on to develop an international organisation, the International Council for the Conservation of the Industrial Heritage (TICCIH) which still flourishes.

Brenda and I were also linked with 'The New Bristol Group' set up by Tony Benn at a time when he was trying to avoid going to the Lords. We wrote discussion papers on all sorts of policy areas, from the fluoridation of the water supply to education and the libraries.

WH. You published 'The Industrial Archaeology of the Bristol Region'?

AB. Yes, in 1969 [fig. 3]. That was a result of linking up with the publisher David St. John Thomas. He was the 'David' of David and Charles and his business partner was Charles Hadfield, the canal historian, and the firm invited Neil and myself to contribute a volume in its series on Industrial Archaeology. I published a pamphlet on The Industrial Archaeology of

Bath at around the same time [fig. 4], and in conjunction with my brother Sandy, a Regional study in the Batsford I.A. series.

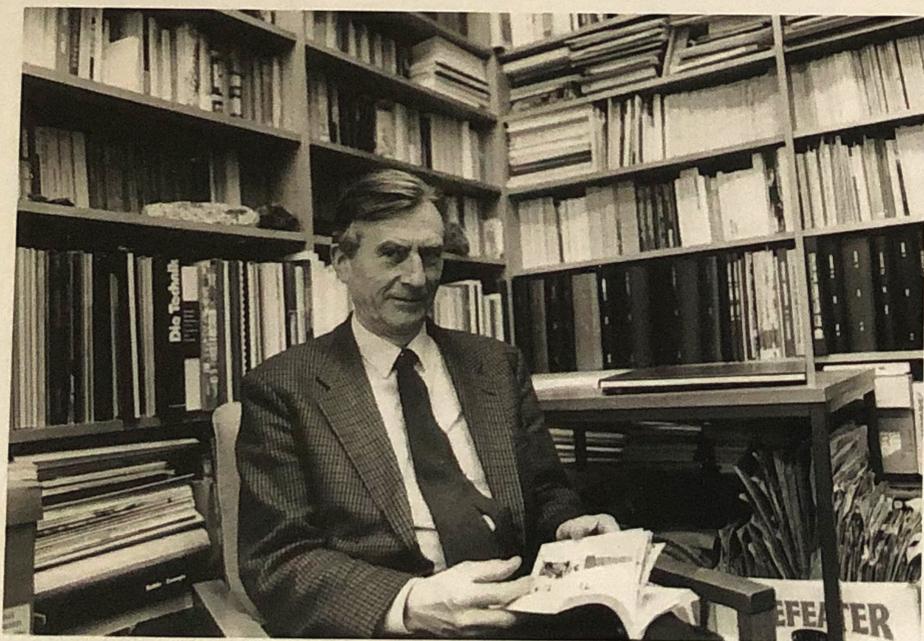


fig 5: Professor R. Angus Buchanan at the library at the University of Bath, 23 October 1991

*Bath in Time - Bath Central Library Collection*

WH. The CAT became The University of Bath - what changes did that bring?

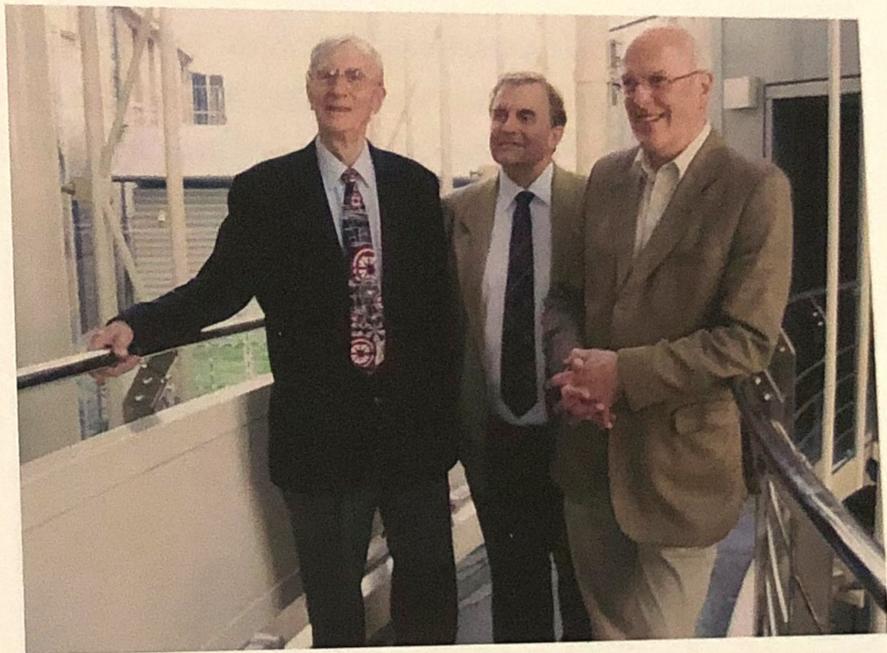
AB. We were granted full university status in 1966 and moved to Bath in stages. Our department became the School of Humanities and Social Sciences, and I was responsible for the degree in Social Sciences for thirteen years. Once we got to full University status the relationship with the Council for Scientific and Technological Awards ended, and there was no longer the

requirement for the one tenth non-core content in our degrees. The Social Sciences thus became marginalised. The Humanities courses ran down and eventually came to an end, which was a profound disappointment to me. I'm proud of the achievements of the University of Bath and am grateful for its support of my activities, but I greatly regret its failure to develop a strong Humanities Faculty. The Humanities Group had in the 1970s been growing slowly but steadily towards such a Faculty - amongst our staff were two distinguished historians, Sir Christopher Frayling and Professor David Gooding - but the Group wound down after 1986 when the

Degree in Social Sciences, for which it was responsible, was terminated. Since then I've tried to keep History alive in the University through my Centre for the Study of the History of Technology (now re-named The History of Technology Research Unit: HOTRU) and its Seminar and we are grateful for the continuing support of the Dean of the Humanities Faculty and the Head of the Department of Social Policy Studies. [fig. 5]

*WH. But there were other opportunities?*

**AB.** As historical teaching closed down it gave me the opportunity to do a lot more outside work and a series of Vice Chancellors has been very supportive as they could see it would bring benefit to the University. For example, from 1987 to 1995 I was Director of the National Cataloguing Unit for the Archives of Contemporary Scientists. It came about because Margaret Gowing, who was the Professor of the History of Science and Technology in Oxford, saw that scientists who had been active in wartime and post-war were in need of a service to preserve their records and archives which would otherwise be lost, so she established a unit to catalogue them. When she retired a replacement was needed to take over the work. Our then Vice Chancellor suggested that I should do it, the Royal Society approved and I took over the staff working on the project. We found a room at the University where archives were delivered and stored. The project staff would go through the masses of documents methodically, sort them into groups, weed out some, catalogue the rest, put them into proper archive boxes, label them and then they would be ready to be dispersed to the relevant bodies. The catalogue records the work of about two hundred and fifty scientists and engineers so far. Now anyone can look up an item of interest in the catalogue, find out where it is, and contact the university or body that holds it for a copy. [fig. 6]



**fig 6: Angus Buchanan, Keith Faulkner and Neil Cossons on the occasion of Keith Faulkner's retirement, 2012**  
*Author's Collection*

*WH. You took leading roles in a number of national and international bodies. Can we start with the Newcomen Society, based at the Science Museum, of which you were President 1981-83 and were elected a Fellow in 2010. Why 'Newcomen'?*

**AB.** The Society aims to foster the study of the history of engineering and it is named after Thomas Newcomen, a Devonian, who invented the first viable steam engine in 1712, a beam engine which revolutionised the pumping of water from mines. The Society publishes a journal and organises conferences last year took part in the tercentenary celebrations of his invention.

*WH. You were a member of the Properties Committee of the National Trust (NT) for twenty five years, and a Commissioner of the Royal Commission for Historical Monuments in England (RCHME) which is now part of English Heritage and was regarded 'as a symbol of excellence in historic building*

recording'. Were there particularly memorable properties or sites that you were involved with? And what was the role of a Commissioner in the RCHME?

**AB.** With the NT I was involved with industrial properties, such as Aberdulais, Dolaucothi, Calke Abbey lime kilns and Lake District Gunpowder industry sites. In the RCHME the Commissioners determined policy and directed the staff. I was particularly involved in industrial sites and supported the publication of books and reports on Textile Mills, Potworks, Docks and Dockyards, Waltham Abbey Royal Gunpowder Mills, canal restoration and so on. It was most interesting work, and at the end of my stint of thirteen years with the RCHME in 1993 I was awarded an OBE 'for services to the history of technology'. About the same time I was elected a Fellow of the Society of Antiquaries of London, and served for a couple of years as Vice-President of this venerable association of scholars.

**WH.** You have had international recognition in the history of technology as Secretary General and later President of the International Committee for the History of Technology (ICOHTEC), and with the American Society for the History of Technology (SHOT) which awarded you the Da Vinci Medal in

1989 for promoting the subject. You have also been Visiting Professor or Lecturer in universities in China, at Canberra, Delaware and at Chalmers University (Gothenburg), Sweden, which awarded you an Honorary DSc (Engineering). That suggests a greater academic concentration on the history of technology than is the case in British universities. Why should that be?

**AB.** Well, that is a complicated question and it requires a careful answer. It certainly seems that there is more sympathy for the history of technology in some other countries than there is in Britain, but that might be a trick of perspective as one tends to see the bright spots in other places rather than everywhere else. In our six-month



**fig 7:** A family group of Buchanans at Ticonderoga, New York State in 2008. l-r Tom, Francis, Andy, Alex, Robert, Brenda, Mary, Neil, Julia and Angus

*Author's Collection*

sabbatical leave in Australia in 1981 for example, when I was at Professor Oliver MacDonagh's Research School in History at the Australian National University (ANU) in Canberra, I was much encouraged by the interest of colleagues and the opportunities to make wide-ranging contacts with engineers concerned about their own historical heritage. Similarly, in Sweden in 1984, when I was invited to serve as Visiting Professor in the History of Technology at Chalmers University for the Autumn Term, there were keen students and staff pursuing courses and research into the subject. The case in China, in 1983, was slightly different, as I had been invited to teach a three-week course in the history of technology at Wuhan on the Yangtse. I found an attentive audience of scholars recruited from all parts of China who were anxious to understand how Britain had come to lead in the process of industrialisation, and my answer was that it resulted from the existence of a relatively 'open' society, encouraging innovation and individual enterprise. I like to think that I contributed a small impetus to the transformation of Chinese

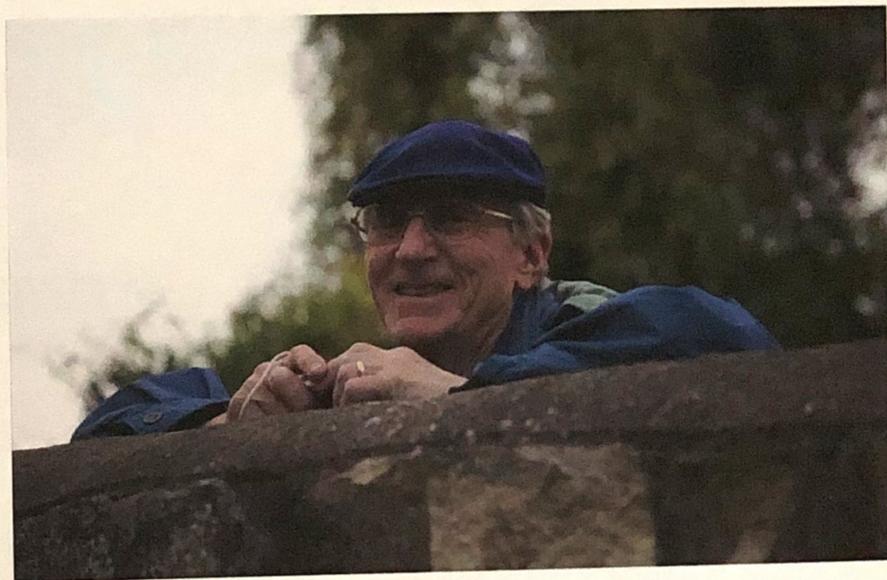
industry and society which was then becoming apparent, but it is by no means clear where this process is leading in China.

Meanwhile, Brenda and I have attended an enlightening series of ICOHTEC symposia since I joined at its formation in 1968 at the Paris Congress of the International Council for the History of Science, Technology and Medicine. We have travelled widely over Europe and North America [fig. 7] to attend these and related meetings, and have found ourselves in a large community of like-minded scholars, in contrast with the few committed to this subject in Britain. In the United States, in particular, there is an extensive field of scholarship represented by courses and designated professorial chairs in the history of technology in their universities, with a vigorous society (SHOT) and an excellent journal, 'Technology and Culture'. This can be attributed to the comparative shortness of American historical interest, in which industry figures prominently, but it is also the result of some outstanding scholars adopting the subject and making it a popular area of research for students.

I realise that this is only a partial answer to your question of why the attitude of British universities towards the history of technology has not been as robust as that in some other countries. However, I remain convinced of the importance of the subject, and I hope that British practice in this field will soon be improved.

**WH.** *You and Brenda have been very much involved in local history organisations such as the History of Bath Research Group (HBRG), the Historical Association and in other local activities. How does local history fit into what might be regarded as 'mainstream' history?*

**AB.** Yes, Brenda and I were both founder-members of the HBRG; Brenda served as the first Chairman while I acted as coffee-monitor and washer-up [fig. 8]. I also served a term as Chairman of the Bath Branch of the Historical Association and was a Trustee of the Bath Archaeological Trust (BAT) until this disbanded in 2005. It was BAT that promoted the publication of 'Bath History' of which Brenda became the third Editor - after Sam Hunt and Trevor Fawcett - serving for ten years and producing five volumes. Four of my articles have been published in this journal. I have also been active in



**fig 8: Angus on a walk with the History of Bath Research Group, 2011**

*Photograph by Dan Brown*

enterprises to preserve Green Park Station, the Victoria Bridge of James Dredge, and the Kennet and Avon Canal; and, as a biographer of I.K. Brunel [fig. 9], I have taken a special interest in his work in the Bath and Bristol region.

Interest in local history has grown and it is now a reputable and approved subject. The University of Leicester has a Centre for English Local History, the University of the West of England (UWE) has a Regional History Centre and other universities have similar groups. But in many places small disciplines have been swallowed into a single history department.

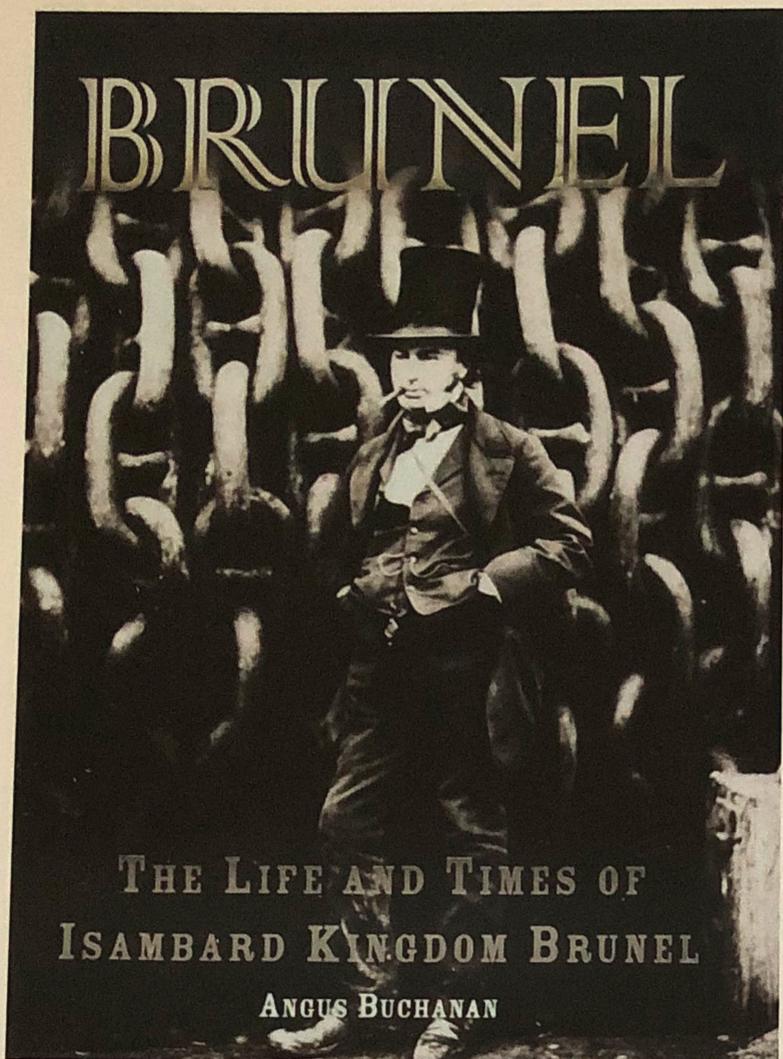


fig 9: The cover of *Brunel, The Life and Times of Isambard Kingdom Brunel*, published 2002  
*Author's Collection*

WH. *What are you currently involved with, and what next?*

AB. HOTRU continues. In 2011 we published 'Landscape with Technology: Essays in Honour of L.T.C.Rolt' which I edited and to which Brenda and I both contributed. The volume reflected Tom Rolt's contribution to engineering history and industrial conservation. I hope to prepare a transcript of Brunel's 'Locked Diary' for publication as a pamphlet in the 'BIAS Histories' series, to continue local work for BIAS and Bath societies and involvement with AIA. ICOTEC will be celebrating its fortieth symposium in 2013, and we have both been invited to make contributions. HOTRU will reach its fiftieth anniversary, all under my Directorship, in 2014 and we are planning a publication to mark the event. Meanwhile, I am preparing some 'Reflections on the History of Technology', while Brenda is working on a definitive study of Gunpowder history. We expect to keep busy!

### Principal Publications:

#### History of Technology:

*Technology and Social Progress*, (Pergamon 1965)

'Technology, History of' in *Encyclopaedia Britannica* (15<sup>th</sup> Edition 1974)

*The Power of the Machine*, (Viking/Penguin 1992)

#### Industrial Archaeology

*Industrial Archaeology in Britain*, (Penguin/Pelican 1972, 2<sup>nd</sup> Edition 1982) (with Neil Cossons)

*Industrial Archaeology of the Bristol Region*, (David and Charles, Newton Abbot 1969) (with Neil Cossons) *Industrial History in Pictures: Bristol*, (David and Charles, Newton Abbot, 1979)

*Industrial Archaeology of Bristol*, (Historical Association, Bristol Branch 1967) (with C.A.Buchanan) *Industrial Archaeology of Central Southern England*, (Batsford 1980) (with George Watkins) *Industrial Archaeology of the Stationary Steam Engine*, (Longmans/Allen Lane 1976)

## **The Engineering Profession**

*The Engineers: A History of the Engineering Profession 1750-1914*, (Jessica Kingsley, London 1989)

*Nineteenth Century Engineers in the Port of Bristol*, ( H.A. Bristol Branch 1971)

'Joseph Whitworth' in John Cantrell and Gillian Cookson, *Henry Maudslay & the Pioneers of the Machine Age*, (Tempus, Stroud, 2002)

'Engineers and Government in Nineteenth Century Britain' in Roy MacLeod, *Government and Expertise*, (Cambridge University Press, 1988)

'Providing Infrastructure: Bath and Civil Engineering' in *Innovation and Discovery*, ed. Peter Wallis, (BRLSI, 2008)

## **I.K.Brunel**

*Brunel: The Life and Times of Isambard Kingdom Brunel*, (Hambledon & London 2002) (with Michael Williams) *Brunel's Bristol*, (Redcliffe, Bristol 1982)

'Introduction to L.T.C.Rolt', *Isambard Kingdom Brunel*, (Penguin, 1989)

'I.K. Brunel, Engineer' in Sir Alfred Pugsley, ed. *The Works of Isambard Kingdom Brunel*, (Institution of Civil Engineers & University of Bristol 1976, Cambridge 1980)

## **Bath History**

*Industrial Archaeology in Bath*, (Bath University Press 1969)

'The Bridges of Bath' in *Bath History III* (Alan Sutton 1990)

'The Floods of Bath' in *Bath History VII*, (Millstream Books, Bath 1998)

'Bath: University City' in *Bath History IX*, (Millstream Books, Bath 2002)

'Brunel in Bath' in *Bath History X*, (Millstream Books, Bath, 2006)

## **Other Works**

*History and Industrial Civilisation*, (Macmillan, 1979)

*Landscape with Technology*, Edited and contributed, (Millstream Books, Bath 2011)

'From Trade School to University' in G. Walters (ed.) *A Technological University: an experiment in Bath*, (Bath University Press, 1966)