

I first became aware of the undesirable aspect of University/Industry relationships when I was recruiting a Technical Officer specialising in electronics. The post was advertised nationally and one of few applicants was an electronics graduate who worked at Cambridge Instruments, the Company from which I had joined the Cavendish some years before. It was while I was considering the applications that I was approached by a senior manager of the Company - a good friend as well as a former colleague - who asked me not to proceed with recruiting the electronics graduate as he was much needed by the Company.

My instinctive reaction to the manager's request was that if an applicant is suitable for a post, which if offered he wishes to accept, it is entirely up to him - it is not for some behind the scenes arrangement to prevent him being offered the post. In the event the applicant was suitable and I recruited him.

I met the Company manager concerned quite regularly on family, Church and other occasions. During these encounters he hinted from time to time that a Readership was being proposed for me. I did not believe there would be such a development and simply ignored the hints.

Cavendish Secretary Vacancy

A key event occurred early in 1960 when the Secretary of the Cavendish Laboratory, Kenneth Dibden, left to become Registrar of the Middle East Technical University, Ankara, an appointment which was made under the aegis of the Foreign Office as part of the Government's Technical Assistance Programme. Soon the vacant post of Secretary was advertised. I saw it but was not tempted - I remember asking an Administrative Officer of the University how he got on working in an organisation which was anti-administration and he replied that it was simple - he himself was anti-administration. I had a reasonably well paid and very interesting job and although there were some day-to-day frustrations there were compensating flexibilities and freedoms.

Before the closing date for applications for the Secretary appointment there occurred a curious episode. The Secretary of IEE's East Anglia Committee, at whose invitation while I was at Cambridge Instruments I had become involved in IEE committee activity, asked me to find out if he would be regarded as a suitable applicant for the Secretary's post, which he considered highly prestigious. I went to see Nevill Mott who greeted me, much to my surprise, with "You are not going to leave me as Ratcliffe has done, are you?" J.A. Ratcliffe FRS was a Reader at the Cavendish who had just been appointed Director of the Radio & Space Research Station at Slough. It was good to be thought of in such flattering terms.

I said I had no thought of leaving and then explained that I had a friend outside the University who had asked me to find out if he stood any chance of success if he applied for the post. Nevill Mott said he should apply in the usual way. When I told Nat Hiller he clearly had not been interested in the post anyway. I wondered at the time if Nat Hiller had been asked to approach me to get me interested and I became more certain this is what had happened as I gained experience of behaviours in the top echelons of society.

Continuing with the events as they appeared to me at the time, in due course the person appointed Cavendish Secretary was I.D.A. (Ian) Nicol of the University Appointments Board, which was essentially concerned with the placement of newly qualified graduates in jobs. For me, his appointment turned out to be a life-changing event.

Unsettling Developments at the Cavendish

Accompanying a number of positive features of my life at the Cavendish there soon began a series of puzzling and unsettling developments and encounters. At the time that is all they were to me - I did not think of them in terms of Industry/University relationships. I was not to get that insight into what was taking place until four years later when the Managing Director of Marconi Instruments, the Company I joined from the Cavendish, said:-

"You were spotted by an Industrialist on a visit to Cambridge and it took us 18 months to winkle you out".

His words were well-chosen - from the action of prising the flesh of a mollusc out of its shell by vigorous prodding and movement with a pin, *to winkle out* has come to mean *to extract or obtain with difficulty*.

Marconi Instruments was part of the prestigious Marconi's Wireless Telegraph Company, which itself was part of the very large English Electric Group. Using the timetable provided by the Managing Director, the start of the *winkling out* works out as mid-1960. There may, however, have been prior actions within or outside the E.E. Group of which M.I.'s Managing Director was unaware.

At the Cavendish I was an 'innocent' regarding manipulative practices, covert methods of influence, the variety of means of obtaining information and the operation of networks (which I came to call groupvines) but during my four years as a member of the E.E. Group I learned a lot about them. As a result, when the *winkling out* campaign was revealed to me I was able to make a start on understanding what had taken place at the Cavendish and why.

Cavendish Secretary suggests I leave

It was something of a surprise that when Ian Nicol and I were talking about the difficulty in recruiting graduate staff for the Electronics Section, he said that a man of my calibre should be thinking of a Readership in a College of Advanced Technology. He said I would get such an appointment easily and he mentioned Northampton CAT (College of Advanced Technology), London.

I told the Secretary that I did not see myself in a normal academic post. What I meant by that is that while I had a great deal of knowledge and experience in electronics, measurement and instrumentation I did not relish digging deeper and deeper into these topics as an academic subject. My interests ranged wider. I did not at that time see that my design processes rather than purely technical approach to electronics might be just what Industry needed. In any case I wouldn't wish to move from Cambridge. I was well entrenched in a number of social aspects of Cambridge life and greatly enjoyed getting to know Cambridge, U.K. and overseas academics.

Likewise, my IEE activities brought me into regular contact with Cambridge electrical, electronic and radio engineers in various University Departments and in Industry, the Public Services and other sectors. There was also a great bonus enjoyed by the IEE in Cambridge - the willingness of key researchers in fields other than engineering to talk about their discoveries and their parallels with engineering.

Links to English Electric

Some while after he had suggested a Readership elsewhere that the Secretary had another go at me. After disclosing that he served on an English Electric (E.E.) committee he said he thought I was wasting my talent at the Cavendish and asked if I would like him to write to his E.E. friends about me. Although I did not wish to move from Cambridge I was interested in learning more about Industry and I was already responding to invitations to some electronics companies. With this in mind I agreed to the Cavendish Secretary writing a letter of introduction. As a result, in March 1961 I was invited to meet George Bosworth, the Group Director of Personnel, at English Electric House in London. We chatted about this and that and it was clear he regarded me as a possible recruit for at one stage he asked me what type of work would interest me and I replied that I was interested in general management and in formulating policy. I was with George Bosworth for the best part of an hour, at the end of which he took me to see an empty office containing two large desks and told me one was used by Eric Eastwood, the Group Director of Research, and the other by my Cavendish colleague, Phillip Bowden.

George Bosworth (who I discovered years later was a Caius man) arranged for me to spend a day at E.E.'s Aircraft Electrical Division at Bradford. I was not greatly impressed, except with one man who I think was the Chief Engineer.

Marconi Instruments

The next outcome of my meeting with George Bosworth was an invitation to visit Marconi Instruments (M.I.) at St. Albans. The visit took place in early May 1961.

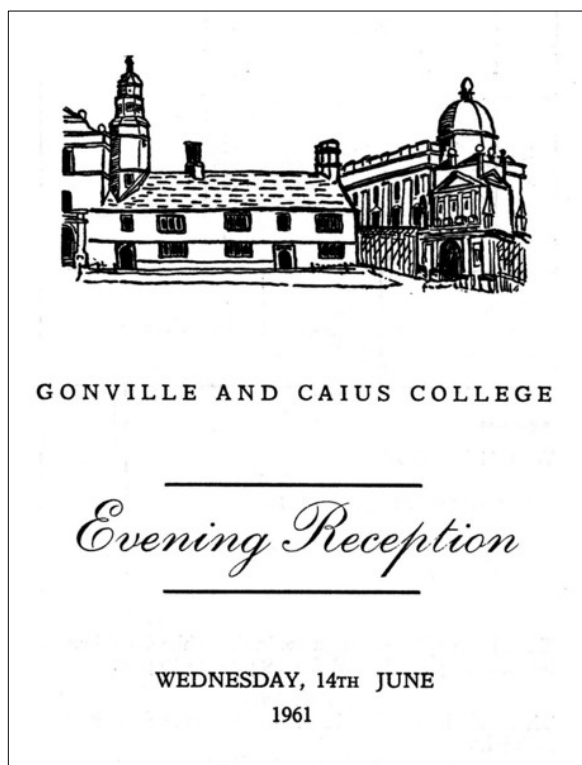
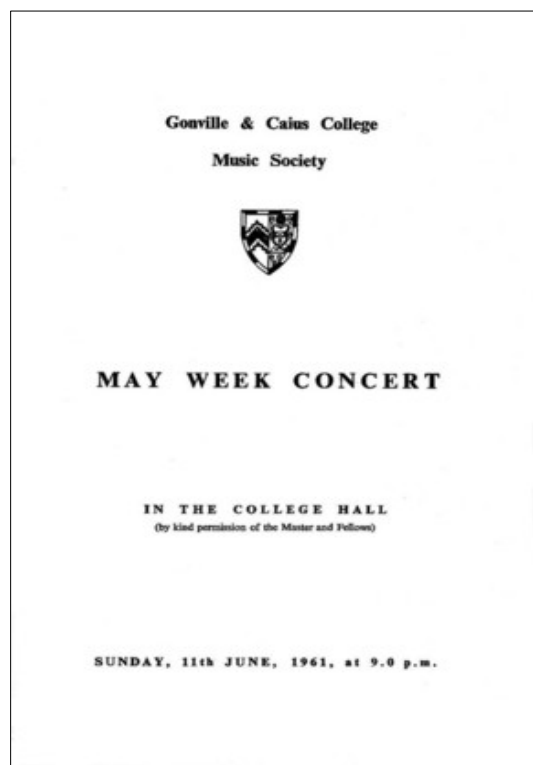
I knew very little about M.I. At the Cavendish we had a few items of equipment manufactured by M.I. and from time to time its Sales staff called. The research student working in my Section on a satellite

instrument, Jan Hugill, considered incorporating a component produced by M.I. I had read that Dr. Reg Gilbert had joined the Company from the University's Department of Geodesy and Geophysics

During my visit I discovered that Dr. Gilbert had departed and had been replaced by a Dr. Ettinger and that he in turn was leaving. A replacement was being sought for Dr. Ettinger and M.I.'s Managing Director, Ray Burnett, offered me on the spot his essentially technical post at a salary of £2250 pa. On 13th May I wrote declining the offer. On 31st May Ray Burnett (a St. Peter's College, Oxford, Physics graduate) wrote explaining the offer in more detail and I replied on 2nd June as before. I was happy to stay put where I was but it was agreed that each could approach the other directly if either should desire to re-open discussions.

Dr. P. Dunsheath

While my communications with M.I. were taking place John Hammond, my friend at Cambridge Instruments, approached me on behalf of his Chairman, Percy Dunsheath. Dr. Dunsheath was also Chairman of the University of London Convocation as well as a Past President of the IEE. His mission was to determine if my wife and I would entertain a prominent Australian politician and his wife, together with Percy Dunsheath and his wife Joyce (a mountaineer), at a Caius College function during May week. All this was to be at Percy Dunsheath's expense. I am not sure now who the politician was but he was at the level of First Minister of one of the States. I agreed to the request. I obtained tickets for a Caius musical event taking place on Sunday 11th June 1961, arranged for drinks to be available in the Junior Parlour, invited the Senior Tutor and his wife to join the party. It was an enjoyable evening.



Likewise my wife and I greatly enjoyed a Caius Reception a few days later, the only pang of regret being stimulated by the sight of a huge array of dishes of strawberries going to waste because salt had been sprinkled on them instead of sugar!

My great affection for Caius College was born the first time I lunched there. The Senior Tutor had turned to me and said "Beck, you are a physicist?" I confirmed that I was and he continued "Tell me, when a flat fish is fried, why does it curl up?" From my knowledge of bimetal strips used to indicate temperature I was able to give a convincing but perhaps not accurate answer.

My College Kitchen account for the Quarter to Midsummer 1961 shows that I lunched more often than I dined – it enabled me to stay in the centre of Cambridge during the day and to be with my family in the evening. The cost of the Dunsheath hosting is also shown.

Cryptic Communications

Detail of Mr. H.V.Beck's Kitchen Account, Quarter to Midsummer 1961		
1961.		
April 28	S.C.R. Lunch	4. 3.
May 4	do.	4. 3.
12	do.	4. 3.
26	do.	8. 9.
June 9	do.	4. 3.
11	Lesson ^{15/-} Flowers ^{10/-}	1. 5. 0.
	b.G.R. Brushes for Term	. 3
<u>Fellow's Wine Account.</u>		
May 26	Wine at lunch	4. 6.
June 2	Wine at dinner	3. 6.
11	1 Bot. Sherry	15. 0.
	1 Bot. Brandy	2. 5. 0.
	2 glasses Port	3. 6.
	<u>TOTAL for QUARTER.</u>	<u>6. 2. 6</u>

There occurred around this time some incidents so unusual that I, so to speak, stored them in my memory with a large question mark against them, the size of the question mark diminishing when later events, awareness that a 'winkling out' process had take place and an increasing knowledge of behavioural practices clarified what had been happening.

The first of these incidents to burn itself on my memory was when, after dining in Caius, a Visiting Fellow from Germany (I cannot now remember if he was from West or East) pointedly asked me why I bothered to dine in College, adding that it was clear I did not enjoy it. In fact I derived considerable pleasure from my occasional dinners in College. In any case what had the question of my enjoyment or otherwise to do with him? I have no record of who the man was and unlike all but one other cryptic

encounters I have had no corroborating experience with him since. It is my strong conviction that his comment was a prearranged discouragement or stick - or in *winkle* terms a painful prod with a pin - with a view to the severing of one of my links with Cambridge. It was part of a diversion technique in which points of attachment are identified and messages delivered for the purpose of cutting the connections.

Another like incident occurred in a conversation with a Professor of Electrical Engineering from Australia. We had got to know him on a previous visit. He had contacted us and as a result I invited him to lunch in the Combination Room, in the course of which he came out with the statement that I ought to join British Industry. He made the point in an unusual manner, as though he had been waiting to say it all during lunch.

Van Grutten

Some puzzling encounters came from University staff calling in my office asking for advice on electronic problems. One such had something of the nature of an intensive vetting about it. The person who carried it out was a Mr. Van Grutten, an Assistant Secretary with the University Appointments Board, who looked after the placement of engineers. Ian Nicol had come from a corresponding position dealing with scientists. Mr. Van Grutten called on me at the Cavendish and said he had devised a new sort of burglar alarm. He then proceeded to quiz me for well over an hour in a most searching manner on its principles, its practical realisation, possible competing techniques and many other facets. At the time, I put his unusual persistence down to natural ebullience and self-interest but I am now almost certain he was questioning me on behalf of someone else and that the burglar alarm was incidental.

Another incident which gave me much pause for thought started with a letter I received from P.B. (Peter) Fellgett asking my advice on how to deal with an electronics technician who was on the staff of the Observatory at Edinburgh, where Fellgett had gone from Cambridge University. It seemed to me he was expecting too much of the electronics man, who was being treated as a second class citizen. I wrote to Fellgett saying in effect that he should give the man a chance to practice his electronics profession in the Observatory environment. Fellgett called in on me a week or two later, pursued the matter further then expressed great appreciation of my advice. He then, surprisingly, said that he had kicked up a fuss over delays in hearing about a Civil Service appointment he had applied for and as a result he had been asked to see Lord (C.P.) Snow himself and state his complaints. His appointment had followed quickly. I wondered if in a roundabout way he was pointing out what he saw as disadvantages of my position at the Cavendish. His point about C.P. Snow was particularly intriguing as it came not long after I had had a

brief encounter with him at the door of the Master's Lodge at Caius. Some years later, PF's involvement in an IEE meeting I was chairing indicated that he played some part of a high-level network.

Cambridge Consultants Limited

From the point of view of later encounters a request for advice by a University spin-off Company was to prove highly significant. It came in mid-August 1961 from a Mr. Tim Eiloart of Cambridge Consultants Limited (CCL). He was also an Assistant Research Officer (or some such title) in the Department of Experimental Psychology and had set up CCL as a sideline. He worked for Richard Gregory, who was a Lecturer in the Department and also initially a director of CCL. I gave Tim Eiloart an hour of my time on something he called an electronic gearbox. It never occurred to me to ask for reimbursement. Later, another assistant in the same Department, named Saltmarsh, came and asked my advice on behalf of CCL.

1961 Cavendish list

Another negative development came with the publication by the Cavendish Secretary of the annual list of Officers. I was shown as lower down the list than I had been before (see p6 of *Memories of the Cavendish Laboratory : 1957-61*). My appointment was specified as being at Assistant Director of Research level and I should have been shown as above the Demonstrators but the new Secretary had put me even further below at just above my Technical Officers. I tend to shrug off such behaviour and made no protest and though I still had not heard anything about renewal of my Cavendish post.

On the Plus side

In contrast with the cryptic communications and negative incidents there were many positive indications and encounters.

I was much encouraged when Nevill Mott circulated the notice of teaching duties for the Part I Practical Classes for 1961-62. I was shown as Head of the 2nd Year A.C. Class for the Easter and Long Vac Terms, 1962, which were long after my current appointment had expired. No doubt I noticed that the Heads of the other three Practical Classes (TW Wormell, J Ashmead & Miss HD Megaw) were Lecturers but I did not at the time recognise that it might be quite significant. For details see p7 of *Memories of the Cavendish Laboratory : 1957-61*.

Likewise the Cambridge University Reporter listed my postgraduate course on semiconductor devices for Lent Term 1962. For details see p8 of *Memories of the Cavendish Laboratory : 1957-61*.

<u>SECTION A - UNIVERSITY OFFICERS</u>		
<u>October 1961</u>		
Professor N. F. Mott	Caius	
Professor O. R. Frisch	Trinity	Nuclear
Professor M. Kyle	Trinity	Radio Astronomy
Professor A. B. Pippard	Clare	
<u>READERS</u>		
Dr. F. P. Bowden	Caius	P.C.S.
Mr. E. S. Shire	King's	Nuclear
Dr. D. Shoenberg	Caius	Mond
Dr. W. H. Taylor	Trinity	Crystallography
Dr. A. A. Townsend	Emm.	Fluid Dynamics
<u>LECTURERS</u>		
Dr. J. Ashmead	Trinity	Mond
Dr. A. G. Budden	John's	Radio
Dr. E. C. Clemmow	Sid.	Radio
Dr. W. Cochran	Tr.H.	Crystallography
Dr. V. L. Cosslett	Pemb.	Electron Microscopy
Dr. T. E. Faber	Corp.	Mond
Dr. P. B. Hirsch	Chr.	Crystallography
Dr. A. E. Kempton	Chr.	Nuclear
Dr. H. D. Megaw	Girton	Crystallography
Mr. J. M. C. Scott	King's	Nuclear
Dr. K. F. Smith	Sid.	Nuclear
Dr. G. L. Squires	Trinity	Nuclear
Dr. D. Tabor	Caius	P.C.S.
Dr. T. W. Normell	John's	Meteorology
Dr. J. M. Ziman	King's	Solid State Theory
<u>ASSISTANT DIRECTORS OF RESEARCH</u>		
Dr. B. H. Briggs	Clare	Radio
Dr. A. Hewish	Caius	Radio Astronomy
Dr. A. D. Yoffe	Trinity	P.C.S.
<u>DEMONSTRATORS</u>		
Dr. C. J. Adkins	Jesus	Mond
Dr. J. E. Baldwin	Queen's	Radio Astronomy
Dr. D. V. Bugg	Emm.	Nuclear
Dr. V. Heine	Clare	Solid State Theory
Dr. J. R. Shakeshaft	St.Caths.	Radio Astronomy
Dr. W. F. Vinen	Pemb.	Mond
Dr. M. J. Whelan	Caius	Crystallography
<u>SENIOR ASSISTANTS IN RESEARCH</u>		
Mr. B. Elsmore	Pemb.	Radio Astronomy
Dr. K. C. A. Smith	Fitz.	Electron Microscopy
Dr. J. O. Thomas	Sid.	Radio
Dr. C. D. Walshaw	Clare	Meteorology
<u>ENGINEER IN CHARGE OF NUCLEAR EQUIPMENT</u>		
Mr. H. V. Beck	Caius	Nuclear
<u>TECHNICAL OFFICERS</u>		
Mr. G. G. Yates	Fitz.	Nuclear
Mr. N. Bett		Nuclear
<u>SECRETARY</u>		
Dr. A. D. I. Nicol	Fitz.	

There was also the attraction of interesting encounters with overseas visitors, especially academics. One such was Professor Jim Ham of the University of Toronto. We probably got news of the arrival of Jim and his wife Mary on sabbatical leave through the Church or perhaps from our good friends the Missens from the same University. We met together on several occasions, the most notable being when Jim asked Sheila and myself to join them for a meal at the Coach and Horses, a mile or so south of Cambridge on the A10. The occasion was the publication of Jim's first book. Jim Ham offered me a senior post in his Department back home, which I politely declined. About 25 years later (11th September 1987) we had the pleasure of lunching with the Hams together with Missens at the Faculty Club, Toronto University.

Next Door Neighbours

Another source of Cambridge and overseas contacts was a house next door to us in Windsor Road. Thus, for example we had a very convivial dinner with Dr. E.C. Childs of the School of Agriculture.

Then, when our next door neighbour moved to Australia, with his family, to take up a 3-year University appointment, a new family rented the house each year. The first family to move in, the Balfours, were from Los Angeles – he was an engineer with an aircraft company and was attached to a USAF base nearby. The mother was particularly well-disposed; I mentioned once that I liked sauerkraut and from then on I was presented with a tin of it almost every weekend, with constant assurance that as it came from USAF stores it was, of course, the best. Likewise, Sheila was given invaluable instruction on how to improve her cooking of this and that everyday dish for as everyone knows the American way of doing these things was the very best.

There was one painfully memorable aftermath to the Balfours' departure. As a parting gift we were given a bottle of dessert wine which they claimed was superlative - they had purchased it on the USAF base and apparently had been told how good it was. We enjoyed the occasional bottle of wine but we were not then knowledgeable and anyway tended to avoid the sweet variety. With our experience of the Balfours we took the claim about its quality with a pinch of salt. So the bottle was put on a shelf for a few weeks, until I happened to spot it just as we were setting out for a party. I took it along and gave it to mine host. Later in the evening he came up to me and said with incredulous wonder "How did you manage to get hold of that?" I saw I had made some dreadful mistake and did my best to save something from the situation so I replied with a knowing gesture "Influence!" I have not tasted Chateau d'Yquem to this day!

The next family to move in were the Reeds from Houston. He was Professor of Parasitology at Rice University. There occurred in the course of their stay one of those little incidents which puzzled me at the time. One day, Clark Reed asked my advice about a mathematical problem. How, he asked, would I solve it, given certain conditions. I advised the use of a computer. He persisted in his questioning in such a manner and to such an extent that I felt I was undergoing some kind of an examination. I asked him if I had given a satisfactory answer and he replied with enthusiasm that he found me one of the most knowledgeable persons over a wide range of disciplines that he knew. Incidentally, in June or July 1961 I took Clark Reed as my guest to dine in Caius College. Since it was in the vacation the meal was served in the Common Room rather than Hall and I remember how impressed he was that Joseph Needham was presiding over the small table.

The next year's neighbours were the Melchrissons (sounded like), from Sweden. It was shortly before they arrived that Professor Danckwerts, who had the Shell Chair of Chemical Engineering, called for next door's key, which had been left with us. My wife showed the Professor around No.50. I did not know until much later that contact had been made with an Elector to the Chair of Electrical Engineering.

Before long, the Melchrissons told us that a Professor D.R. Cressey, a Los Angeles criminologist, was very keen for us to dine with them. So in November 1961 we and the Melchrissons spent a very pleasant evening with the Cresseys. From information on the internet it seems that D.R. Cressey was a very distinguished criminologist.

More Positives

It was in April 1960 that I went to lunch at Clare College as a guest of Sir James Baker, Director of the Engineering Laboratory, to meet IEE President Sir Willis Jackson FRS. This was the occasion when I congratulated Charles Oatley on his appointment as Professor of Electrical Engineering. The event took place prior to the 18 month 'winking out' period but not so much that it can be discounted as part of that talent management scheme. However there were other incidents which indicated the existence of another scheme.

For example someone went out of their way to say that when Phillip Bowden had declined a request to be present at a weekend house party of E.E. Directors in Devon, Lord Nelson of Stafford (the 1st, who was Chairman of the Group) had sent a plane to Cambridge to pick him up.

Another interesting development was a hint from Bill (A.H.W.) Beck, like myself an I.E.E. man, who had joined the Engineering Department from Industry after I joined the Cavendish. Bill Beck said there was a lectureship available in High Voltage engineering and that he would be pleased to see me transfer to the Engineering Department. Since, later, High Voltage was used as a euphemism for myself (H.V.) and considering that it was by our initials that we electrical engineering Becks were often distinguished in the University, I have reasonable grounds for considering that Bill Beck was indicating his support to my movement towards the Chair.

There were other Engineering Department encouragements, such as an invitation to a private dinner in Trinity College, which was Charles Oatley's. The invitation was jointly from Engineering Department lecturers and IEE members K.F. (Ken) Sander and W.C. (Bill) Nixon who with our respective ladies provided a very convivial evening. Bill Nixon had been in Phillip Bowden's Section at the Cavendish.

It is appropriate to mention here a visit by a Mr. Christopher Rivington, who was a senior member of the I.E.E. Publications unit. It was clear that he came to see me in Cambridge to get to know me, an action warranted by future developments which others had in mind for me rather by my current status in the Institution.

Cavendish Secretary has another go

It was against this background that one day in mid-1961 Ian Nicol said he had run into someone connected with Marconi Instruments and the question had arisen of whether I might be interested in a more responsible post than the one I had discussed with them before and had declined. The manner in which the new suggestion came about was such that I nearly turned it down flat; I had left the door wide open for an approach by M.I. direct to me yet it seemed that, instead, M.I. or English Electric were involving Ian Nicol. I now wish I had obeyed my instincts instead of thinking that if this was the way it was done I ought to go along with it. I also regret I did not demand to know when I would hear formally about the new or renewed post at the Cavendish. However by this time it was clear that Ian Nicol was not keen on having me around and this had got me down to such an extent that I felt I was being churlish – indeed I said as much to Nevill Mott as we walked across a field at a Cavendish Sports event and I took little encouragement from the fact that he very kindly disagreed. On top of this, one of my graduate recruits, Gilbert Yates, looked as though he might be leaving - he had asked me to act as referee for a post in an entirely different field. My situation at the Cavendish was therefore distinctly unsettled. Unfortunately I allowed the negatives to take priority over the positives. I told Ian Nicol that I could see no harm in negotiating again, without any commitment on my part or by M.I.

The new contact with M.I. continued to be neither direct nor straightforward. The next development was that on 2nd August 1961 a Mr. Ahern, significantly in the absence of his boss, George Bosworth, wrote to say that English Electric could not offer me a job at Bradford following my visit there "some time" ago (an offer of a job at Bradford was the last thing I wanted or expected) but that Mr. Burnett of M.I. had in mind a better post at a greater salary than the one he had previously offered me. Mr. Ahern asked me to write to let him know if I was interested. To cut a long story short, on 16th August 1961 I again visited M.I. at St. Albans, I received an offer of appointment dated 6th September from Bill Brian, M.I.'s Company Secretary, and on 24th September 1961 I wrote accepting the offer. The die was cast and I began preparations to join M.I.

Final Manoeuvres

I soon received an extraordinary apology. Ian Nicol sought me out while I was showing a visitor (a Tequipment man) over the practical class. Nicol said in front of the visitor that he had an apology to make, whereupon I suggested he continued in privacy in a neighbouring place, which was the Maxwell lecture theatre. There he told me that notification of renewal of my appointment had got lost somewhere and had only just come to light. He said it was his responsibility, he should have chased it earlier. He then said he imagined I was no longer interested I replied that I would have liked to have had the opportunity of continuing in the post and that it had crossed my mind that he had delayed matters deliberately. I then quickly changed the subject and soon afterwards I returned to my visitor.

Soon after the apology I attended a meeting of the Management Committee – I was carrying out all my Cavendish duties. Under a staff planning item Nevill Mott referred to a new post of Lecturer in charge of Practical Classes and I watched helplessly as in passing and with the words "this no longer applies" he crossed it off his agenda. I have little doubt this was on his list for my benefit. I was a 'natural' for the proposed new Lectureship. I had headed one of the practical classes for three years and was making quite a name for myself in that field, my 1961-62 Practical Class duties had been published in The Reporter, the heads of the other Practical Classes were Lecturers and it is highly likely that Nevill Mott would seek to put me on the same level to encourage me to remain at the Cavendish. I wonder now when Ian Nicol knew of this proposal and how much he had told Nevill Mott of the M.I. developments – I had not informed anyone of what was taking place.

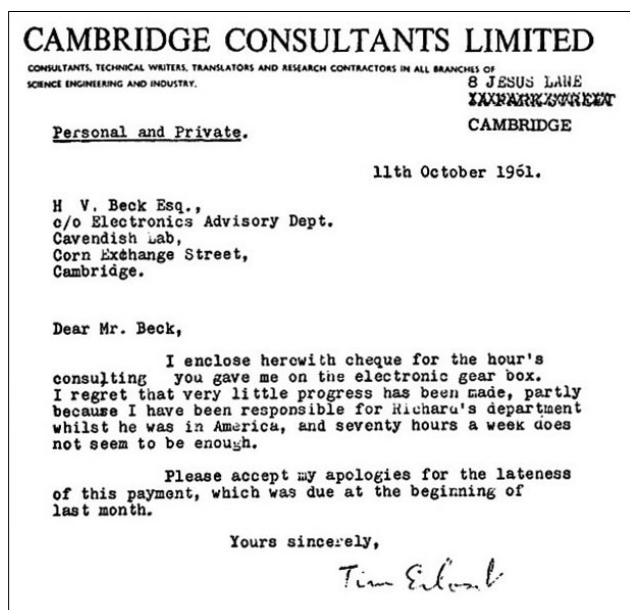
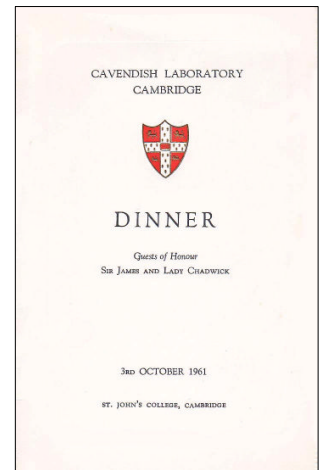
Last Quarter at the Cavendish

I took part in quite a number of events and activities in the last quarter of 1961, in the course of which I wondered even more if I had made the right decision about joining M.I.

The Dinner in honour of the discoverer of the neutron took place at this time and I felt privileged to be present.

Before I took up my post at M.I. there were two events which later caused me disquiet. The first was an IEE Banquet held at the Café Royal at which the guest of honour was Shockley, who was then only of transistor fame. Seated at the same small table was an M.I. man named Christopher and his wife. The event took place after I had accepted the M.I. appointment but before any announcement had been made. Either the seating of us together was coincidental or there was a link between M.I. and the IEE in the matter of dining arrangements. From later experience I have no doubt now that the latter was the

case.



There was another interesting development when, on 11th October 1961, Tim Eiloart of CCL sent me a cheque for the hour of consulting time I had given him. This prompted me to consult him about two weeks later on what to charge M.I. for a patent it wished to purchase from me. His advice was too vague to follow but the discussion with him of the basic issues was useful. When by early December 1961 agreement on the patent was reached with M.I. - they purchased it outright for £500 - I sent Tim Eiloart a cheque for £25 for his contribution to my thinking on the transaction.

In mid-November 1961 I attended a Dinner in College, which I think was in honour of Dr. Caius.

<u>18 November 1961</u>										
A.S. Turner	Dr. Chappell	R.J. Balcombe	T.C. Cave	The Master	J. Wodak	Dr Shaffer	P.L. Taylor	Dr Waddington	A.C.S. Crossley	
Lord McNair	-----									Dr Needham
C. Campos	Mr de la Hoyde	G. Windsor	Mr Prichard	A.J. Kirby	A.R. Crofts	Mr Frend	R.G.H. Kelly	Prof. Lampe	R. Hansen	
Mr Phear			Dr Bowden				Dr Powell			
P.K.Dicker	J.B.Martin	M.J.Berridge	I.G.van Breda	H.G.Bowden	T.F.Mathias					
Mr Quinn	A.N.Broers	Dr.Davie	Mr Tranchell	B.J.Mkate	Dr Davey					
P.E.P.Norton	Mr Hamlin	D.Bailin	L.T.Chadderton	Prof.Banks	R.G.Lord					
Dr Macpherson	J.H.Conway	Dr.Shoenberg	P.C.Thornton	R.S.B.Chrystal	P.F.Crane					
A.Wells	M.D.Henry	M.S.Bretscher	Dr Secco	R.L.Morris	Mr Barnes					
H.W.Ludwig	Dr Dobbs	G.D.Pratten	T.S.Sarin	Mr Argue	H.J.L.Makin					
Dr Stopp	P.B.Bowden	Dr Fitzsimons	B.J.McGreevy	P.R.King-Smith	Mr Beck					
P.L.Havard	A.Challinor	P.E.Clifford	Mr Farrell	C.D.Rodgers	A.D.Bibby					
L.L.Riave	Dr Chapman	Dr Soule	G.O.Z.Sundstrom	Dr Wood	Mr Montefiore					
Dr Clark	B.P.Johnston	R.A.Gayer	Dr Tubor	J.P.Jakubovics	W.D.Davidson					
J.A.L.Watson			M.H.Jericho	B.Harris						
Dr Greaves			Mr Grierson				Dr Naylor			

On 5th December, at short notice, I gave my talk on the H-Bomb to Senior Officers of Hertfordshire and Essex Police.

A day or two later I voted in Senate House on Payments for Clinical Responsibility.

I think it was at the end of the last quarter of 1961 that the Sputnik lecture took place.

On Christmas Eve 1961, the Telequipment man, who knew I was joining M.I., insisted on travelling from London to my home in Cambridge for the sole purpose of presenting me with a Christmas hamper. It was in front of him that Ian Nicol had confessed he had an apology to make regarding the delay in renewing my appointment. Four years later I read in *Managerial Psychology* (a book provided by English Electric as part of a Management course) about the technique of having a spotter present when 'firing a shot'. I guess that the Telequipment man, a member of the electronic instrument industry, had been present by prearrangement as a spotter, to provide feedback on how I reacted to Ian Nicol's 'confession'.

Finally, a day or so before I took up my appointment at M.I., I received through the post a leaflet about a book on what qualities are needed in a Managing Director. I had never before received such a mail shot. If it was a contrived hint about my future prospects it proved to be counterproductive because when I read it I was much put off by the managerial attitudes espoused therein.

Postscript

After being told about the ‘winkling out’ process, I analysed what had happened in Cambridge, together with events while I was at Marconi Instruments and during the subsequent ‘wilderness’ period. It became clear that the English Electric Group had a very strong presence in the University of Cambridge, which was used in the ‘winkling out’ process:-

- At the Cavendish Ian Nicol was on an E.E. committee and Philip Bowden was a Director of the Group.
- The Chairman of the Group, 1st Lord (G.H.) Nelson of Stafford was a member of University Appointments Board, from which Ian Nicol joined the Cavendish and Van Grutten came and quizzed me.
- The Chairman’s son, H.G. Nelson, who in 1962 succeeded his father to the peerage and as Chairman of the Group, was on the Appointment Board to the Chair of Electrical Engineering. Not only that I found that the E.E. Group had recruited a Lecturer in the Department of Engineering, Viscount Caldecote, who had then had a top-level career within the Group and he also was on the Appointment Board to the Chair. Other members of the Appointment Board were Nevill Mott, Sir James Baker and Professor Danckwerts.
- On top of that, Lord (C.P.) Snow was an E.E. Group Director.
- Very likely other University Officers with whom I came in contact were consultants to Companies in the E.E. Group.

Taking into account all that had happened from 1960 onwards I concluded that:-

- I had been identified as a possible successor to the Charles Oatley, Professor of Electrical Engineering.

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BOARDS OF ELECTORS TO PROFESSORSHIPS		
<p>For each Board, the names of the two members nominated by the Council of the Senate are printed first; then the names of the three members nominated by the General Board; and then the names of the three members nominated by the Board of the Faculty to which the Professorship is primarily assigned. The dates are the years in which the terms of office end; the day of termination is 9 November.</p>		
<p><i>Electrical Engineering.</i> Mr H. G. Nelson (<i>King's</i>) (1963), Prof. P. V. Danckwerts (<i>Pemb.</i>) (1961). Prof. N. F. Mott (<i>Cai.</i>) (1962), Sir George Thomson (<i>Corp.</i>) (1960), Mr E. L. E. Wheatcroft (<i>Cai.</i>) (1961). Prof. W. A. Mair (<i>Down.</i>) (1963), Viscount Caldecote (<i>King's</i>) (1960), Prof. J. F. Baker (<i>Cla.</i>) (1962).</p>		

- I had been identified as a prospective President of the IEE in its Centenary year (1971).
- A number of influential Cambridge people not mentioned above (e.g. Sir Henry Thirkill) were given the impression I would be returning to a senior University appointment after a spell in Industry.
- The Talent Management scheme envisaged for me at E.E. Group level was along the lines of the Viscount Caldecote recruitment but leading to appointments similar to Phillip Bowden’s.
- The Managing Director of M.I. successfully diverted me to his own Talent Management scheme but the E.E. scheme remained and the tension between the two caused insuperable problems.
- There may have been another type of Talent Management scheme in operation e.g. Establishment as well as Industry.

I was not ambitious for any of these developments, though I dare say I would have been at least adequate had I gone along with them. What greatly concerned me more than anything was that others were taking covert decisions and actions regarding my career. This is where human rights issues come in.

Harold Beck
March 2014