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Temporarily a Librarian: Michael Keeble Buckland Oral History Interview

Interviewed by Robert V. Williams, April 7-8, 2011, Columbia, SC.
Headings, minor additions and corrections by M. K. Buckland Dec 16, 2013, June 7, 2023.

EARLY LIFE

RW – This is an oral history interview with Michael K. Buckland on April 7, 2011.

I have that you were born on November 23, 1943.

MB – 1941. In Wantage, UK.

RW – OK. So tell me about your parents. Your father was an Anglican priest.

MB – Yes.

RW – What was their education, background, those kinds of things?

MB – My father, Basil Buckland,¹ was a farmer's son. His mother was upper middle class and his father was working class.² They were both extremely strong minded. His mother was the daughter of a high ranking bank officer in London. His father was the son of a tally clerk. A tally clerk is the man who stands at the docks, counting the bales that are carried on and off the boats. So, among dockers, that is a high standard, but elsewhere it is not. He decided, when he was a boy, that he was going to be a farmer. Now, how does a tally clerk's son in the East End of London, the docks, get to be a farmer? His father said, No, you are going into the docks. He replied to his father, Yes, but after ten years I am getting out and I am going to be a farmer. After ten years, he had saved £25 and he could not buy a farm for £25 even then. He had a friend with another £25 so they put it together and borrowed another £50 pounds and went into business in the wadding trade: horsehair and stuffing for sofas, that sort of thing. Ten years after that he told his wife, I am going to buy a farm. He left her with two very small boys. She did not know where he had gone, but she got a telegram saying, "Have bought the lot. Take the train to Devizes station." It is in the West Country and he had bought the cheapest, most broken-down farm. You buy a lease, technically. You do not actually buy the land itself. It was crossed by a railroad and by a canal and in terrible condition. This was just before the First World War. She met him at the station and he took her around the corner and bought her a pair of boots. He then showed her this broken-down farmhouse and she burst into tears. Her wealthy father paid for a remodeling. When they eventually left she burst into tears because she loved it. They moved to outside Oxford, and that is where my father grew up and went to high school. He did his degree in English, English literature.

RW – At Oxford?

MB – At Oxford. Then he went to theological college. He decided early on that he wanted to be a priest, but the real influence on his life was an evangelical group called, then, the Oxford Group. It became known as the Moral ReArmament and is now Initiatives for Change. It is interdenominational, Quaker-influenced, and is connected way back with Alcoholics Anonymous. He went to Wycliffe Hall theological college in Oxford and then became a curate, an assistant priest, first in a rough industrial area in Yorkshire then in a comfortable suburb in London.

My mother, Norah Elaine Rudd, volunteered at the church.³ So she met this handsome young curate. They fell in love and they married. It was a very close marriage. She also became involved in

¹ Walter Basil Buckland (1909-1985). *Take heart: The memoirs of Basil Buckland*. Yeovil, UK: Linden Hall Publishers, 1987.

² Dorothy Maud Buckland, née Keeble-Smith (1883-1965). William Walter Buckland (1876–1959).

³ Norah Elaine Buckland, née Rudd (1909-1990).

Moral Re-armament, which dominated my parent's social life as well as their spiritual life. My mother was adventurous. She had traveled and lived in Egypt and Jordan for a while. She became very serious.⁴

My mother's family had been well-off. The father owned two paper mills. They had lived in a large house, since demolished to build flats, to the east of London in Kent. They had seven children and the two brothers ran the family business afterwards, including a paper mill in Yorkshire, which was eventually bought out by another firm. They had money.

My parents married in 1937 and moved to Battersea, an industrial area south of central London, a year before the war broke out.

The Blitz devastated the whole area. My father refused to leave during the war because his responsibility was his parish. One of the first things that happened in London with the outbreak of the Second World War was that all the children were evacuated. They were just taken to train stations and put on trains, like the "orphan train" out at New York city, and went out into the country. At stations the train would stop and people would volunteer to provide foster care. I realized recently that I do not know where I was in the latter part of the war. I was born in 1941 in the middle of the war and I do not know where I was until the end of the war. I was probably with my father's parents in Wantage, where my mother went to avoid the bombing to have me. That is why I was born there. Later on, I know that my older brother, Peter, and I were in a little village called Much Hadham with friends of my parents, not with my grandmother, who was a rather difficult woman.

I do have a memory of waking up in the bomb shelter in our garden in Battersea. My father told me the most difficult thing he ever had to do was to go out into the country and find a boy who was, I think, eight or ten or something, and tell him that his entire family has been killed by a bomb. My earliest memories are in London. I went back there recently for the first time in over sixty years. I found the house intact. It is now offices. Almost everything else had been cleared as urban renewal and the church, St. Peter's, is not there. It had caught fire and burnt down. So my early memories are in a grim area of London near Clapham Junction railway station.

Then in 1947 we moved, in total contrast, to a very rural area, Sandon, in Staffordshire. A little village with an earl and a hall, a big one, and a Norman church on a pre-Norman Saxon foundation on a hill. Near the church had been the original village and the original moat of the original hall and a gamekeeper's cottage. That is where it had been. They have done some archeological excavations. The village moved to the other side of the church into the valley where the river Trent and a railway line and the main road run. It is a place called Sandon, with about 500 people in the entire parish, a farming community. The earl had resisted dormitory suburbs being built there. It had one canal with one lock keeper, one church, one village hall, one pub, the Dog and Doublet, one shop, one policeman, one post office. The nearest building—we lived in the vicarage, which was next to the church—was a quarter mile away. On one side a gamekeeper's cottage and on the other side a little parochial school, which had no electricity and the children had to pump water from the pump in the school yard. When we first got there our house did not have electricity. So that was a contrast to London and it is where I was imprinted. That is where I grew up. I was about five when I went there and I went to the parochial school which was run by the church.

My brother, Peter, is about three years older. He now lives in Vancouver, Canada. I had a younger sister, Mary, ten years younger, who died in 2010.⁵ My brother and I had different careers but it has worked out for both of us quite well. In those days, in English primary education, you had an "eleven-plus" exam, which was an intelligence test, really. That determined which kind of secondary school you

⁴ In 1964 my mother and her friend Mary Whitehouse she launched a "Clean Up TV Campaign" to protest indecency in broadcasting. In 1965 this became the National Viewers and Listeners Association, later renamed Mediawatch-UK. The television docudrama *Filth: The Mary Whitehouse Story* (BBC, 2008) features my parents but in diminished way.

⁵ Mary Namih, née Buckland, 1951-2010.

went to. There were three kinds. There were the elite academic schools, called grammar schools and there were the “secondary modern” schools, which is a euphemism for everyone else. There were a few technical high schools for people in between. Totally classified. It has largely gone now and you have comprehensive schools as in the United States. I passed the “eleven-plus” exam a year early and went to a good high school in Stafford, which was about four miles west of the village. I went in by bus each day.

Then, in a comparable contrast, in 1955, my father, who loved this country area, felt that he needed to do more. He had been under pressure from the bishop to move. We moved into Stoke-on-Trent, which is a seriously grim industrial area only about 15 miles north. Staffordshire is a mixed up county. The southern end is part of the so-called Black Country, around Birmingham, and the top end, northern end, is Stoke on Trent, which is, culturally, where the North begins. This has the pottery industry, Wedgwood and all those people, and in those days was appallingly polluted. It is also a coal mining area, so the ground is subsiding and the houses are often cracked. But in between, there is just a belt of the most beautiful countryside. So we moved into Stoke on Trent, immortalized in the novels of Arnold Bennett. I cannot say I appreciated the move. I liked the country. We lived in Longton, which is one of the so-called “five towns”. I moved to a pretentious, academic secondary school and, by accident, got to be two years ahead of grade in terms of age. Somebody with more initiative might have taken a year out and gone around the world or taken a job, but I just stayed on and studied more. I stayed in high school two years after I could have left.

The English educational system is seriously specialized. I had to choose between chemistry and Latin at age eleven and chose Latin. You were streamed into “modern”, which means humanities, or science which is what you would expect. In those days you took a bunch of exams called Ordinary Level School Certificate, nominally at age 16, although often earlier, and so I did seven or eight subjects. The only science course I did was math which I gave up before calculus. Then for the final two or three years it gets even more specialized. In what is called the Sixth Form, which is everything after Ordinary Levels, you do three subjects only and I did English, French and History to Advanced Level. I was not really interested in English and I do not recall why I chose English. I was interested in History and was willing to do French. So after two years, you take your Advanced Level Certificate exams and this is what you need to get into university. There is a variation on it called Scholarship Level, which requires some extra work. So I did English, French and History and then another year I did French and History to Scholarship Level. Then I stayed on another year. Meanwhile I had been keeping my hand in with Latin, because in those days it was a university requirement at Oxford and Cambridge. I did Advance Level Latin and a composite subject called Economic and Political Science in which I focused on economic history. I learned a lot. I took the entrance exam to St. Peter’s College, Oxford, which is where my father had studied, and was accepted but told to stay away for a year because I was too young. I studied much harder after I had been admitted than before. In school, because I was big and strong I was required to play on the rugby team, which I did. But I much preferred tennis. Rugby is a vicious game. There is such a premium on violence. It is similar to American football, but you do not play with protective gear and you do not stop. American football is much about stopping.

RW – Yes.

MB – Rugby goes on, nonstop. It is a very tough game. Then when I went to college, I took up rowing, rowing in eights. I was at a disadvantage, because I had not rowed in secondary school as others had, but I did that partly because, like tennis, there is not a premium on being vicious. There is a premium on skill. I did a lot of rowing and I studied hard. The system there is unlike the American system. You have a tutor and you meet with your tutor every week. You prepare and read aloud an essay that the tutor criticizes every week. At the end, he will ask for an essay on some other topic and he will suggest some books to look at and the rest is up to you.

RW – This is the entire program for...

MB – The entire program is that way. There are lectures provided but attendance is optional. They were not connected with any exams in any direct way and nobody asks whether you go or not. You just had to

wear a gown if you went in those days. I reckoned I read part or all of 500 books during the degree which was an intensive three-year degree in History and additional history and auxiliary history and nothing else. There was...

RW – So it is essentially a History major.

MB – It was History total.

RW – History totally, OK.

MB – Early on, you had to pass an exam in “French for historians” and “Latin for historians.” You had to translate a bit of Medieval Latin. And “Political Science for historians” and “Historical Geography for historians”. These were rather small exams. You had to pass them, but otherwise it was entirely history. The program had two main components: one was the history of the British Isles from the beginnings to 1914. You can’t come much more modern because you don’t have historical perspective! And a shorter period of European history. I chose European history from 1789, the outbreak of the French Revolution, through 1870, when the Prussians creamed the French. I have always been interested in the nineteenth century and I learned an awful lot. My overachieving in French in high school, where I concentrated entirely on reading and vocabulary and not writing, came in very handy. I had got wonderful scores on French to English and barely passed on the English to French in my high school exams. I became interested in central Europe and, again, economic history, the Industrial Revolution.

BECOMING A LIBRARIAN

My parents had been leaning on me to declare what I was going to do when I grew up. Being decoded, this meant which of the professions are you going to go into? While still in high school I felt that the only way I could deal with my parents would be to give them an answer, even if it was only provisional. So I thought about it. We lived just behind a big building that had a public library which I used sometimes. I decided that libraries were socially useful institutions and probably a pleasant place to work. I was not willing to discuss what I was going to do when I grew up. My father’s father wanted me to become a farmer like him. But you cannot do that without capital. It was not realistic. So I announced that I was going to be a librarian until I found something more interesting to do, which is still my position. [Laughter]. My parents were taken aback. This was not amongst the options that they had thought of and they were not very impressed. Librarianship in Britain is not as much a woman’s profession to the extent it is in the US. They did not know what librarians did and they supposed they were not very well paid. This idea just had not occurred to them, but, to their credit, they accepted it. They had asked a question and I had given an answer.

[Note: Parts may be missing]

MB – The London University library school was long established. It was affiliated with University College London and it had an archives track and a library track. It required students to have a year's experience in a library as a condition of admission. Now I think this is a good idea because it prevents people going to library school who find out afterwards they do not want to work in libraries. It also provides a better basis for the instructors to deal with. If you have a student who has never had a job and never worked in a library, it is much harder to teach. I did not appreciate this requirement because it delayed getting a job by a year, delayed everything by a year. But London had an arrangement with SCONUL [Standing Conference of National and University Libraries], which is the British equivalent of the Association of Research Libraries, whereby the university libraries would have a trainee program whereby you would go and be paid very little to provide cheap labor for a year. This then qualified you for the requirement of University College London, so there was really no choice but to go. They were called SCONUL trainees. I simply applied to be one at Oxford University’s library, the Bodleian, when I

was living in Oxford. I had Ted Parsons to vouch for me.⁶ So, after I graduated I became a trainee, a SCONUL trainee, at the Bodleian in August 1963.

When I showed up they had no record of having hired me. They put me to work in the stacks until they decided what to do with me. That is how I did the classic entry to librarianship: as a stack page. This was not common in England because they did not have stacks in the same way as in the US. After two weeks I was put in the cataloging department. They had their own cataloging rules, a variation of the old British Museum Library cataloging rules and quite different from the Anglo-American Cataloging Rules. The catalogers only did descriptive cataloging and no subject headings were assigned. The books were put into closed access stacks. There was a classification scheme but one person assigned all class numbers except for some that were sent off to, for example, the Law library or other specialized library. Cataloging was purely descriptive cataloging to their rules which were incredibly precise.

They never went to catalog cards. They stayed with the guard book catalogs.⁷ Cataloging was extremely rigorous, so rigorous that you did not need tracings. You could tell by looking at the entry where the other entries would be and it was extremely concise. I learned a great deal about cataloging in a non-standard way before I went to library school.

The Keeper of Printed Books at the Bodleian, L. W. "Lars" Hanson, who ran the main part of the library as opposed to manuscripts, was on the advisory board for the University College London School of Library and Archives Studies. He took me aside and said that I should go to library school. Most of the staff at the Bodleian had not been to library school. They had been trained in the Bodleian's own arcane procedures and they were trapped. They could not go anywhere else or it was difficult. This was a personnel problem with bottle-necked people who could not move, even if they wanted to. Hanson said, I am on the advisory board of the University College London library school and you should go to library school. Nowadays you need to go to library school. I hear there is a new one starting in Sheffield. If that is so you had better go there instead of University College London.

RW: But Sheffield had the one year requirement?

MB – Yes. That is a rather telling criticism of University College London which had had a hotshot young new director in the thirties called Raymond Irwin. He had been the County Librarian of Lancashire and it was a classic case of a director of a library school staying too long. He stayed there very long time and the school sort of got stuck in the mud.

So I applied to University College London and I applied to Sheffield, which had not yet then opened. I interviewed at London and I probably did not interview very well, because they told me to my face that they did not think I could handle their course. I have reminded them once or twice since. [Laughter]. Sheffield said, Come. So, that is how I decided to go to Sheffield. I was one of the first intake of students. There were, as I recall, twenty-three students, something like that, in the first class admitted. There were four faculty, none of whom had been faculty before and this was a great advantage, because it meant that first year that if anything went wrong it might have been their fault. In subsequent years they did not think that.

We did everything together. All classes were the same class, the same people, except for some elective courses. The faculty were teaching these courses for the first time. We would take coffee breaks together so there was a great esprit de corps. Most important, it was superbly led, by a man named Wilf Saunders,⁸ He was just the right person. He talked very smoothly. He put on this very old-boy attitude. Well, that has too many connotations in the South, I understand. He looked a bit like the quintessential company secretary. He had just the right touch in dealing with all the bureaucrats and administrators. He had just the right connections and he was very diplomatic and very charming and dapper. He did an

⁶ Edward J. S. ("Ted") Parsons, curator of maps at the Bodleian Library, was a friend of my uncle W. Graham Buckland (1911–2002) and had showed me around the Bodleian.

⁷ Large bound or loose-leaf volumes into which catalog entries were copied or pasted.

⁸ Wilfred Leonard Saunders (1920-2007).

amazing job. Tom Wilson who followed him also did a very good job. The school was very fortunate. Its first two directors must have covered thirty years.

At the Bodleian I learned about cataloging and I also had an indelible impression of the devastating effects of bad management. That really influenced my career for a long time. It was very badly managed, with very poor use of human resources.

RW – At the Bodleian?

MB – the Bodleian. That really got to me.

RW – Because of just being there too long or doing the same thing year after year?

MB – They just were not interested. They had no background in management. The chief librarian was always a scholar. When I was there it was a man called J. N. L. Myers. They put the word out that the reason he did not recognize any of his staff was because he was short sighted. This was a fiction, I think. He was into Roman British history. There was great emphasis on scholarship. They identified with the British Museum. Well, put it this way: I would come into work one morning and my desk would be covered with piles of slips of card. These were the slips on which the catalog record was written by the catalogers. My job was to sort them as to whether they had been used on one side or both sides. If they had been used on both sides I would put them in the waste paper basket; if they had been used on one side, I would put a line through it, turn it over, and the card would be used again. Now, it is true they did not pay me very much.

RW – Sounds like high-end intellectual work

MB – I got £8 a week. Eight pounds something a week. The value of labor was just not understood. The staff were frustrated because they were locked in and there was little opportunity for promotion. Oxford is a very seductive place and they were pretty much content, but, nevertheless.

What I got from Sheffield was something totally different. It was an attitude that however things were being done, there is probably a better way. That is what I got at Sheffield.

RW – These faculty came mostly from academic or public libraries?

MB – Special libraries.

RW – Corporate libraries?

MB – Wilf Saunders, I think he ran an education library, a school of education library. I think he also had some corporate library and academic library background. He had been in the Army too. The one I retained the closest connection with Franklin Samuel “Sam” Stych, who is still alive in his nineties. He had come up through the ranks of the Birmingham Public Library reference department, one of the great European libraries. He was a reference librarian.

The third one, Joan E. Friedman, had been dealing with encryption in the Second World War, cryptanalysis. I do not remember what her background was. She taught cataloging and classification. She must have worked in cataloging somewhere. The fourth was a Czech immigrant with a science background, Herbert Schur. I do not think he had formal library training but he had worked in a special library. Science information was his background. He was actually my dissertation advisor but it was not a good relationship.

Well, I had been accepted at Sheffield and what I learned there was really an attitude. There was a broad view of what librarianship was about. They changed it to School of Librarianship and Information Science. It was an attitude that however things were being done, there is probably a better way, though not in a hostile sense. I came to learn that, very often, where there is a library school on a campus the relationship with the library is not always good. Some of this is structural in the sense that the faculty have an obligation to tell their students what is the latest and best way to do things. This evolves all the time and there is no way an existing library can keep changing. So, there is a tendency to have an implied criticism of any actual institution with legacy systems, unless the faculty show proper respect for the people in the trenches actually doing the work. But in a constructive sense, the people doing the work need all the help they can get and if you could do anything to provide or develop more cost-effective, more effort-effective procedures, then everybody would be ahead. So it was a very open and constructive

atmosphere. It was the first year of the school. This was a new venture for the campus. The School had a nice old house that had been remodeled. We were not sharing a building with anybody else.

In the meanwhile, while I was an undergraduate, my older brother had graduated from Cambridge in Engineering. He got a math scholarship but majored in engineering. It was a general purpose engineering degree, and he went to work for a civil engineering design company because they specialized in large suspension bridges, which was what he wanted to do. He was based in London so I would go up to London from Oxford and stay with him. It is only fifty miles away with excellent train service. He lived in an apartment which was the top two floors of a row house that had four floors. One time I went and he said there is a party tonight. What that meant was that if anybody living in that row house had a party, they would invite everybody living in the building so they would not complain about the noise. On the ground floor were two young German women, Rita and Inge, who were enjoying life in London, had a party that night. He said, we are invited so why don't we go. So we went and I saw this gorgeous young lady sitting demurely there. I went up to her and said, "Hi, my name is Michael, what is yours?" She said her name and I replied that I would never be able to remember that. She was not interested in me, so I did other things. But I did notice that in the food line she was looking at me. She was an Austrian au pair girl in a house on the other side of London. She had met Rita and Inge at the night school English classes that all these people took when they came to England to improve their English, so they had invited her. It was the only party she went to in eighteen months in England. She had arranged to stay overnight with them because it was difficult for her to get home late at night. So she could not leave and I did not need to leave and we talked until five o'clock in the morning. A day or two later I summoned up my courage. I called her and invited her to go to a carol service at the Royal Albert Hall. She had no other plans, so she agreed to go. She promised to teach me German, a promise that fifty years later I am still waiting to collect on. We married a few years later in 1964 shortly before going to Sheffield. Before long she became pregnant. I was in the first class and I was the first student in the school to have a baby. I got a new job, we bought a house, we had a baby, and I took my final exams all within about two weeks.

THE UNIVERSITY OF LANCASTER

Having got what was called a postgraduate diploma, basically a one academic year Master of Library Science degree, I applied for two jobs and I went for two interviews. At one I was turned down and the other I was accepted. That is how I decided to go to Lancaster. The University Librarian at Lancaster, Alexander Graham Mackenzie, had huge expectations of the Sheffield library school and its graduates. That and a good reference from the Saunders was what got me in.

Sheffield was an old university but I was in the first intake of students at the new library school. I went there in the fall term, as they call it, in 1964. I was an undergraduate college student 1960 through '63, bachelor's degree, then a SCONUL trainee at the Bodleian Library of Oxford University for the calendar year 63-64, and then I went to Sheffield for this postgraduate diploma for the academic year 64-65, and then I got my first professional job starting in July '65 at the University of Lancaster Library.

I published a little memoir about my Lancaster experiences.⁹ Mackenzie deserves enormous credit because he innovated in a lot of ways. Academic librarianship in Britain had a whole new lease on life in the sixties because of the creation of the so-called "new universities". These were brand new universities. "Red brick" refers to the nineteenth-century Victorian universities. Sheffield was a red brick university. The "new universities" were founded in the nineteen sixties as the result of a government report which said there should be a massive expansion of higher education, so we need more universities: Warwick, East Anglia, Essex, Sussex, Stirling, Lancaster, and York, mostly cathedral towns. Lancaster

⁹ Buckland, M. (2009). The Library Research Unit at the University of Lancaster, 1967-1972. In J.R. Griffiths and J. Craven, (Eds.), *Access, Delivery, Performance: The Future of Libraries without Walls: A Festschrift to Celebrate the work of Professor Peter Brophy* (pp. 7-20). London: Facet Publishing. Preprint at <http://people.ischool.berkeley.edu/~buckland/lancasterlru.pdf>

does not have a cathedral but it had a big castle used as a prison. The first intake of students at the new University at Lancaster was in the fall of 1964, a year before I got there. It started in the former furniture factory of Gillow, a famous furniture maker, while they built a whole new campus on a green field site just south of the town. The University Librarian was almost the first person appointed.

Lancaster was unusual. It had what in American terms would be called a land grant ethos, unusual for Britain. In other words it accepted that it had a responsibility to the region and should do useful stuff as well as intellectually interesting stuff. The founding president, called Vice Chancellor there, was a mathematical economist who was also a Quaker. So he had sort of got you covered on both sides. His name was Charles F. Carter. That was the sort of environment that I liked.

I should mention that in high school I decided I was never going to be a teacher. And in college I decided I would never be a professor. This is known as career planning! [Laughter] But it was a very deliberate thing to become a librarian. My parents believed absolutely that one should make the world a better place, that one had an obligation to society. That was just simply the way it was. It is a sort of Protestant ethic issue and they dedicated their lives to making the world a better place. This was taken for granted. My brother made the world a better place through better bridge design. I totally accepted all of this and felt, and feel, that library services, information services, absolutely met that requirement. I had really no contact with commercial or industrial activity other than visiting my uncle's paper mill once.

I don't know how relevant it is, but, if you're a parish priest, you do not have the same social relationship with your neighbors as you would if you were a plumber or a gamekeeper or a farmer. It is a difficult role. You cannot become too intimate with other people. It inhibits normal friendship and, my parents mainly made friends outside of the parish, with people that had spiritual convictions that were the same. They were dominated in their thinking by the Moral Re-Armament movement, which was an attempt to improve standards of honesty, purity, love and unselfishness throughout the world. It was developed by an American called Frank Buchman and it has a new name now, Initiatives For Change. That was the environment I grew up in. Very serious and ethical.

RW – Strong social justice?

MB – Yes. It was not phrased as social justice in any civil rights notion. It was just that the world would be a better place if people were more ethical, and more honest, and less selfish, and so on. A very basic Christian view. The Anglican Church regards itself as the one true Catholic and Protestant church and is very traditional. Moral Re-Armament, for me, was a kind of blend of that and Quakerism.

RW – Right.

MB – So that is really my background. I think my mother would have liked me to go into the Church, as a priest, but that was not in the cards. I do not expect to be sitting on a cloud with a harp or to be toasted in hell when I die. In many ways my father's religion was a rather secular religion in the same way that Quakers are spiritual but they are engaged in society. I think he would not have tolerated a spiritual life that did not have this kind of social engagement and this led to some tension between him and his superiors.

RW – For lack of attention to spirituality issues?

MB – No. But some bishops were hostile to Moral Re-Armament and what it stood for because it was non-denominational or they did not sympathize with its style or they did not have the same social conscience. When we went to Sandon, that was the little village in Staffordshire, there was an inspiring elderly bishop in the Lichfield Diocese, called Woods.¹⁰ He would go on pilgrimage walking from parish church to parish church on foot and he understood what my father was into, and why a healthy, strong young priest might want to go to this rural backwater because it allowed him to do other things in addition.

The Church of England legal set up is different from elsewhere. If you are the appointed priest of a parish, it is called a "parson's freehold" and nobody can remove you. The bishop cannot remove you,

¹⁰ Edward Sydney Woods, 1877-1953.

the congregation cannot remove you. You have an absolute right to that “cure of souls”. Unless you are convicted of heresy or moral turpitude you cannot be moved. That is a strong position.

Medieval law continues in that the local earl was the patron who had the right to choose who would be appointed vicar. That is subject to the bishop’s permission, but the “presentation” was the earl’s. There is a technical term for this: advowson. The Earl of Harrowby at the time had low church sympathies. These are technical terms. “High church” is like Roman Catholic ritual and “low church” is more like the Methodists. The Anglican Church of England has a wide spread on this. The Earl had fairly low church sympathies and was somehow connected with Julian Thornton-Duesbery, who served as Master of St. Peter’s College and as Principal of Wycliffe College, and was a Moral ReArmament activist who knew my father well. I believe he recommended my father for this appointment. So, there were forces at work that resulted in my father getting a letter which caused him to get out a big atlas to find out where Sandon was and to go there. But Bishop Woods’ successor was unsympathetic and kept pressing my father to go a larger, industrial parish. Eventually he did this, but to one of his choice. He felt it was a good move in terms of what the world needed. In 1955 we left Sandon and moved to Longton, one of the five towns of Stoke-on-Trent, and while I was working at Lancaster, he left there and moved to two tiny villages near Wantage.

It can be a tough role. His successor at Longton committed suicide because of the hard time the parishioners gave him. Later my father went to these two tiny villages near Wantage and, at a time when the Church of England was acutely short of priests, as the Roman Catholic Church is, the bishop bullied him into retirement. I mean it was really stupid. So he left. He resigned and moved to Newbury, a nearby town, which was handy for going to London, so that he could continue his vocation partly through Moral Re-Armament directly and partly by helping local vicars who needed somebody to help them out with weddings and when they went on vacation.

Going back to Lancaster...

RW – Lancaster, right. Did you take this job there knowing that this was going to involve creation of a research unit?

MB – No.

RW – Okay, so you took it, just to go in and ...

MB – Well, I needed a job. I had applied for two and had only been offered one of them. I was newly married,

RW – Right

MB – and needed money.

RW – And what was the job as described?

MB – I had said that Graham Mackenzie pioneered in many ways. This was a golden era. The sixties was a golden era for university libraries in Britain. The creation of the new universities meant new university libraries which opened up opportunities for mid-career people who were otherwise, as the phrase is, waiting for dead men’s shoes. Graham Mackenzie was a perfect example of somebody who got a chance before he was too old. A lot of the directors of libraries innovated, but Lancaster, under his leadership, innovated in almost every direction. A fine new building that was very functional, that he worked on enormously with a local architect, the introduction of bibliographic instruction, which was pretty new—I did some of this, as a couple of my publications reflect—and a three-tier staff structure, based on the German model, or at least resembling the German model. A lot of professional work in libraries did not require subject expertise, but does require expertise in librarianship. Many, perhaps most, British librarians at that time did not have university degrees. They went from high school to library school. So they were competent qualified librarians but they did not have a university degree. So, the staffing structure at Lancaster had three kinds of staff. You had librarians with subject expertise and they were narrowly focused on work that required subject expertise and they dealt with academic departments. They would each deal with the department on campus that taught the subject which their own bachelor’s degree and the rest of the departments were divided up as best we could.

RW – But these subject specialists had the degree from the library school, right?

MB – They had that also. Remember, British bachelor's degrees are highly specialized and advanced by American standards, narrow but advanced. And they had library degrees, too, called post-graduate diplomas then. Actually I did not deal with the history department because there was already somebody on the library staff with a history degree. I tended to pick up the management area, which I was interested in.

Then, there were the Senior Library Assistants. These were professional librarians that did things like inter-library loan and cataloging but not the subject part. They ran the circulation desk and they were paid less. Regular library assistants without professional qualifications and clerical support did most of the actual work. It was a three tier structure. I was hired as an Assistant Librarian. This was the term for a career position as a subject specialized, qualified librarian.

I was supposed to deal with all aspects of the needs of certain departments. These included Operations Research, Britain's first such department. They called it Operational Research. And a program of Systems Engineering, and one or two others. In addition, being a tiny staff, we divided up other tasks. I got to be the rare book librarian, but mandated not to spend more than two hours a week on it! They bought, essentially sight unseen, the collection of a Scottish laird whose mansion was falling down. Rain was coming in on the books, mostly collected by somebody who went on a Grand Tour of Europe when the Napoleonic Wars were over. There was lots of old stuff. It had already been picked over by book dealers and we just got the rest in a pretty poor state of repair. I had fun cataloging those. I also got the assignment of building up the reference collection, basically from scratch. How many people get that opportunity? Being an Assistant Librarian involved liaison with the academic departments, responsibility for selection and collection development, bibliographical instruction, and specialized reference. It is a broader role than is usually meant by "subject specialist" in large American university libraries, which tended to mean poring over second hand book dealers' catalogs in those days. I did this for eighteen months.

Mackenzie had a background in Latin and Greek and he had then served in the Royal Air Force and become enamored with machines. He had a handlebar mustache, as RAF people liked to. He was very enterprising and imaginative and he had a lot of courage. He and Charles Carter, the Quaker economist Vice Chancellor, hatched a plan which involved going to the British government and saying, look you are spending a lot of money on new universities and specifically you are spending a lot of money on new university libraries. This is a large capital expense and a large continuing operational expense. People know quite a bit about the history of libraries and we can see how libraries are currently being done, but it is not clear anybody is really thinking about how library services *ought* to be. So why don't you fund us to find out. When they had interviewed for the University Librarian position, when they interviewed Mackenzie and presumably other candidates, they said, come with us. They got him into a car and they drove him out of town and they stopped by the side of the road, scrambled through a fence, and started to climb up a hillside that looked a bit like a scene from Wuthering Heights, with sheep bleating. Lancashire specializes in rather bleak landscapes. As they were walking up the hill they turned on him and they said, What would the ideal university library be like in twenty years? We want one right here, and the students arrive in eighteen months. To his credit, instead of withdrawing immediately, he took this as a personal challenge. It was just a wonderful stroke of good luck that I got involved with this library and this University Librarian.

They went the government and asked to be paid to plan what the ideal university library ought to be like in twenty years' time. The government, paralyzed by the logic of this, agreed and asked what was wanted. They said, we want five years' funding for a big project with money to hire a principal investigator with a status of a full professor, which means much more there than here, and an interdisciplinary cast of psychologists, operational researchers, and whatever. The government agreed. It is barely possible to explain how radical this was for Britain then because there was no tradition of library

research. No research on library methods, at all. Library research meant the history of libraries or the history of books and manuscripts.

RW – The library association did not have any kind of research office at this time, right?

MB – No.

RW – I guess it was ASLIB¹¹ that had one then...?

MB – ASLIB, yes. But that was really a consulting firm for special libraries. They were the only people doing research but it was really about science information and special libraries. That was the only operation in the country and it was building up at that time.

The Lancaster initiative was so radical that they took an unusual step. They copied what you do with architectural competitions. If you want to build a spectacular new building it is usual to have an architectural competition in which architects who want the job have to submit proposals of what they would do. And then one of them is picked. So they advertised internationally for people who would like to do this project. They had to submit proposals of what they would do and why they should be chosen. Lancaster appointed a committee of the graybeards of the profession as a jury. This was an irony because if the graybeards of the profession had been that good, you wouldn't have needed such a project. Anyway, they reviewed the proposals and, picked two, who were commissioned to refine their proposals. The deal was that they would be paid, but then the university would own the intellectual property on the proposal, with an expectation that the person who proposed it would be hired to do it. The committee of graybeards said that this is not as they would have done it, which was really ironic, and the whole thing collapsed. This was seriously discouraging for Alexander Graham Mackenzie. The program officer¹² at the government said, why don't you try something a little less ambitious. We will give you a grant. Call it "Systems analysis of a university library" and we will budget a person and a half. That was the only option, for one year. There wasn't really a grant proposal, I don't think. Nobody had much clue what that meant, except that in those days systems analysis had two meanings. One is what you do before you write software, and the other was an analysis for operations research, and it was clearly the latter. But nobody had any idea of what, actually, we would do.

Graham had a high opinion of the Sheffield library school and this extended to a high opinion of me. Whether or not it was justified he reassigned me—"seconded" was the term we used—to work full time on this grant, and the other half position was an accommodation whereby a statistician from Imperial Chemical Industries, who was intended to be a faculty member in the Department of Systems Engineering, but the Department of Systems Engineering could not afford him. They could only afford half of him. So he got a faculty position, but the downside was that he had to work half-time with me in the Library for a year, which he, Ian Woodburn, did and we got on very well together. He had no more idea of what to do than I did. At the end of the year the situation was the same. So he had to put up with me a second year.

I had a bad dream around that time and the dream was that we were at the end of the project and we handed in a report that was consisted of a pile of blank sheets of paper because we had not known what to do.

RW – [Laugh]. Now you had not had any systems analysis courses...

MB – No, and I had given up math.

RW – . . . or programming or anything, right?

MB – No. I did take a class on ALGOL, which involved the towers of Hanoi puzzle, which seemed to me rather pointless. But we were motivated. Graham and Ian Woodburn and I had different objectives but they converged. Ian was a very pragmatic man. He said let us see if anybody can find books because libraries have to deal with providing books for people. We took a look at the reserve collection. It was

¹¹ Association of Special Libraries and Information Bureaux.

¹² Probably Brian Perry (1936-2006), then at the Office for Scientific and Technical Information and later Director of the British Library Research and Development Division.

called the Short Loan Collection. We did some clever statistics on how often people could find the books in the reserve collection that had four hour or overnight loans and what would it take to increase the chances of books that were asked for that were not available.

RW – So it was his idea the center ran on, the central problem of can one find a book one wants.

MB – I don't recall how far it was his idea. Certainly this was something that he thought was a good idea and he had the statistical equipment to do, which I did not. And that is what we did. We wrote a technical report¹³ and showed that very little investment in a few extra copies would transform the situation. What we did not know is that if you do improve service, the demand goes up. The solution was that the person running the Short Loan Collection was given a pot of money to buy duplicates whenever he thought it was needed, so you have an adaptive service. Having done that, we then looked at the open stacks. This is a more complicated situation because it is more difficult to collect data and because there were different loan periods for different classes of users. With difficulty you can find out how often each copy of each book has gone out on loan. You have to infer from that data how often it was looked for and not found. And where was it when it was not found? Well, normally it was out on loan, so loan policies were an important determinant of availability. Cracking that problem was what I wrote on as my doctoral dissertation. Although in principle you could use queuing theory it is too complicated and breaks down. Once you start getting realistic about how complex the system is you can do what was called a Monte Carlo simulation where you simply program a computer that with one side of its memory is a library and then the other side is a series of users generating random requests or requests of any form or pattern you like, and then keeping track of how often it was available and this sort of thing. It was an almost perfect example of what Monte Carlo simulation can do. The basic principles were known to all librarians, that the distribution of demand over the titles is highly skewed (Bradford's law) and there is a cat's cradle: For any given book, there is a tight relationship between the pattern of demand (how often and in what pattern), the number of copies, the loan period (how long it is out), and the probability of the next person finding it. If you control any three of those, the other is determined. So, with some data collection, we divided the collection into five tiers of demand. From never, basically, to high demand, which, in a university library open stacks is about three times or more a year. Then we can simulate the effect of any combination of loan policies (knowing how that translates into actual retention times) and number of copies, and compute what the options are. There is a trade-off between buying extra copies or shortening the loan period. This was a real problem because Mackenzie had a talented staff, he had innovated in every way, and it upset him that people couldn't find books in his library. The campus library committee was upset by this, too. This is not the way it should be with a new library that has had a lot of money thrown at it. So we were charged to look into this and we were able to do it. By this time, I got a different collaborator. Ian Woodburn was allowed to go off and do systems engineering full-time and I hooked up with a very bright Operational Research faculty member, Anthony "Tony" Hindle, who had a background in industrial psychology. That is unusual in operations research. He was also interested in public services situations, such as hospitals and libraries. He was a young man my age. We got on very well together and we developed a really good partnership. He was perfect in terms of methodological issues, and very clever. So we did this work and we wrote the report for the Library Committee which is printed verbatim in the book I wrote.¹⁴ In the end we said that people can find what they want about six times out of ten, overall, and the ideal library would have 100% immediate availability for everything anybody wants, but

¹³ M. K. Buckland & I. Woodburn. *An Analytical Approach to Duplication and Availability*. (University of Lancaster Library Occasional Papers, 2). Lancaster, England, 1968. Also ERIC Report ED 022 516. Summarized on pp. 60-68 of Buckland, M. (1975). *Book Availability and the Library User*. Pergamon Press.

https://openlibrary.org/books/OL5048020M/Book_availability_and_the_library_user

¹⁴ Buckland, M. (1975). *Book Availability and the Library User*. Pergamon Press.

https://openlibrary.org/books/OL5048020M/Book_availability_and_the_library_user

that is not attainable. If you split the difference and ask what would it take to get 80% immediate availability. The choice is either spending much of next year's book budget on duplicates or a very selective shortening of loan periods and make faculty adhere to the same loan policies as students. Around 1970 was about the one time when the politics of the situation would allow that.

The Library Committee opted for the shortening of loan periods, so we hired students to go through the entire collection looking at date stamps. According to an algorithm, if it was above a certain number that book was made subject to a one week loan period, renewable, and if it was above a certain higher number that book was a candidate for buying a duplicate. Immediately the availability went to eighty percent. At the end of that year it was sixty percent again. The reason was that the improved service had attracted much higher demand. We started with the library that had the highest per capita borrowing of any university library in Britain and it doubled. As you might imagine, this was a real education for me, doing this operations research.

RW – And you're coming in with no statistics background at all?

MB – None.

RW – Yes? So you must've been picking this up on the job pretty quickly then?

MB – Yes, but it is not difficult to get a sense of what statistics is about, even if you do not understand how to do it. The other thing that is important is that Monte Carlo simulation is simply a simulation. You do not need to know anything other than that you can roll dice and if you have a loaded dice it will come out in a non-standard way. It is easy to understand that and a flow chart. That was the approach we used. I was willing to accept unquestioned anything that either Ian or Tony said about statistical reliability and sample size and all that. This was pretty innovative stuff.

RW – Who was posing all these problems as you go along?

MB – It was up to us to identify what these problems were. But what dominated what we did was the logistics of library service and the availability of books. We had to take in other work to fund what we were doing. We set up a Library Research Unit. Actually, two were set up with the same name. One was a division of the Library, and the other was a division of the University's development company, Uldeco Ltd. We did not draw much attention to the fact that there were two. It was for accounting flexibility. Hardly anybody knew about it. It gave us flexibility we would not otherwise have had.

My PhD advisors at Sheffield were willing to accept a write-up of this work, knowing that it was not simply my work. They decided that there was enough there that even if it was not all of mine there was enough for a dissertation. My dissertation was entitled *Library Stock Control*. It was approved early in 1972 and then revised for publication as *Book Availability and the Library User*, which was published by Pergamon Press in 1975. I am going to make that available on the web.

RW – As far as I know, and you would know a lot better, no one else had ever looked at this issue, statistically anyway, of what was happening to a book in its lifetime.

MB – No. Well, there were four projects simultaneously, independently, that looked at loan periods. Three in the U.S. and us. Philip Morse at MIT wrote a book on it. He used only queuing theory so he could come up with results, but it was not really closely related to actual reality. There was a project at Johns Hopkins and a fourth one I do not remember. Ours was the only one that was done in a library and it was the only one that involved a librarian.

There was a period when operations research applied to libraries was in vogue. Donald H. Kraft was actively involved in this and Edward T. O'Neill.

RW – This was later...?

MB – No, it was about the same time. There was a professor at Purdue University called Ferdinand F. Leimkuhler in the School of Industrial Engineering and Ed O'Neill and Don Kraft were among his doctoral students researching library issues. This was at the same time. There was just a brief period when a few other people looked, somewhat, at loan periods, but we were the primary ones and we did it in great depth.

My father and his father liked to think that we were descended from Gypsies and it is possible because Buckland is an unusual surname, except amongst English Gypsies. Nobody else thought this was a good idea because Gypsies did not have a good reputation. You would not want your daughter to marry one and all that. But I got restless once in a while. My parents were always having guests in the house, usually through Moral Re-Armament. We had foreigners coming and going, so I was used to a fairly cosmopolitan, international scene. My father, when he went on vacation, always liked to go somewhere he had never been before. This appealed to my mother, who as a girl had always been taken only to the same place. I would get restless to go somewhere and in those days there was quite a demand for British librarians in the colonies, in the Commonwealth. I find job descriptions for a librarian wanted somewhere and this would upset my wife, who had a baby. One of the position descriptions said malaria was now rare in those areas normally occupied by Europeans! [Laugh] My good Austrian wife, this was not what she had in mind. I liked to tease people in California that I always wanted to work in an undeveloped country I just did not know it was going to be California. [Laugh] But I rarely applied for these jobs because I was on to too much of a good thing at Lancaster. I was, I think, the highest paid employee for my age and was being paid full-time to do really interesting worthwhile research with colleagues that had the necessary technical skills. What more could you want? Really!

RW – And you weren't doing reference duty or any of those kinds of things...

MB – I had done that for eighteen months. In fact, I had done just a little of almost everything that was done in a university library. I had started as a stack page. I did cataloging. I did subject classification using the Bliss Bibliographic Classification. At Lancaster I did bibliographical instruction. I developed a reference collection and, at no more than two hours a week, I was a rare book librarian. I liaised with academic departments and occasionally I would deal with some reference questions. I took my turn at the circulation desk in the evenings. Had it been a larger library I would not have had all that in only eighteen months as a real librarian. I can claim to have done just about everything academic librarians do. I also got a little bit involved in early computerization and in designing a circulation system.

RW – So Lancaster was doing a little bit of this, automated circulation?

MB – Yes. We developed an automated circulation system that involved a mini computer at the circulation desk and files were updated on the campus main frame overnight. We called it a hybrid system. But by that time we had hired somebody who really did understand computing, Bernard Gallagher so I really was not very much involved in it. They had programmed a paper tape driven typewriter, a Friden Flexowriter, to generate the catalog cards in the traditional form and they had kept the punched paper tapes. It was in fact possible to reconstruct MARC-compatible records from these tapes because of the punctuation, the carriage return, and other symbols. That was intended and it was done, but I was not really involved in it.

I worked in the Library Research Unit on a day to day basis with Tony Hindle, the Operational Research lecturer. That is what they call a career academic: Lecturer or Senior Lecturer. He could not spare much time. He and I had a pact that we would do nothing unless both of us were cordially convinced it was a good idea to do it. The result was that when we did anything it turned out to be worth doing. We did not do a lot of less productive things which any ordinary research project would have done. That is really why that research was incredibly productive and rich: Because of the things we did not do. Hindle was a sort of a skeptic. That is not quite the word, but he has to be persuaded that something was really worth doing, but then, if it is worth doing, he is very smart and talented and able to do it. That approach is unusual, in my experience. The other thing was that Tony and I and Graham Mackenzie had different backgrounds, different positions, different abilities, and played different roles. They just came together in an astonishing way. Graham could not do the research. He did not have the time. He did not really have the background, but he wanted it done and he was going to make it happen. He needed us. I was working on it full time. I did all the grunt work and I did all the technical writing. All the texts had to be reviewed by Tony, who was very sensitive about technical terms, and by Graham who really enjoyed rhetoric. To get something approved by both of them was a good challenge and resulted in good reports. I

did not have the methodological skills. All I had was my time and energy. Tony had the methodological skills, but he was not about to write. He would not do anything other than what was really needed, but we all had a vested interest in the success of the research.

RW – Well, you had spent all that time at Oxford writing those essays, too. So that...

MB – You write essays from about age ten or eleven in England. All the way through secondary school you are writing essays every week and it shows. I did not know what a standardized test was until I got to the United States. I did not know what they were talking about, in terms of, you know, checking boxes.

PURDUE UNIVERSITY LIBRARIES

MB -- Anyway, the main place where anybody was doing any operations research in libraries was at Purdue. At Purdue, like most of the large ARL libraries, they had hired a young man at the end of the Second World War and these people stayed on. Robert Downs at the University of Illinois was an example. But all across the US, university libraries had lots of money thrown at them and the libraries exploded in size. The most extreme one is Toronto where, as I recall, every conceivable measure of the library octupled under one director's term. The downside to this is that when you have a change in scale like that, a different management style is needed, but you still have the same person. At Purdue, the University Library was being run in a dictatorial fashion, more appropriate to 1947 than 1967. The director, Professor Moriarty, retired, got caught in a snowdrift, got pneumonia, and died. The head of technical services also became ill and died.

Moriarty fancied research being done and so he got this young assistant professor of industrial engineering, Leimkuhler, to do research on library problems. It did not involve the librarians. It was a good idea, and it had good effects in terms of the field, but it was not really addressing the library's problems. These were not that library's main problems, in my view, and it did not involve the librarians.

With Moriarty gone, they tried to find a new director of libraries. They had difficulty because the libraries had a very low status on the campus. Long-time President Frederick Hovde would make speeches saying that you make great universities by hiring great faculty not by buying great books. They did expand into humanities but they said to the humanities faculty, if you want books you drive over to Champaign-Urbana or you drive down to Bloomington. It was said that when the student protests began Purdue was a haven of student rest. Engineers were not in the forefront.

RW – Not going to cause any problems.

MB – That is right. The humanities faculty were unable to deal with this and unfortunately took it out on the library. There was a very bad situation. Also, there was a system whereby the deans of the colleges got to choose how much money went to the library. On those terms they could not find a director of libraries. They got one person who took the job then asked for his contract back and left after a week. [Laughter]. This went on for at least two years so they decided that if they could not get a director, maybe they should get on with replacing the assistant director for technical services. Unbeknownst to me, Ferd Leimkuhler, with whom I had developed a friendship, by mail mostly, put my name in the hat without telling me. I got this astonishing letter saying they were looking for an Assistant Director for Technical Services and would I like to express an interest? Now this is so un-British that I thought to myself, what would happen? I should have some fun with this. So...

RW – Now this is during your 'restless' period, that you were describing earlier...

MB – Yes. Well I am still restless.

It was so outside of anything I had ever encountered, including the phrase "to express an interest." In Britain you had to apply for a job and then all the candidates were interviewed one after another on the same day. It was all structured in the way that it is now here as a result of affirmative action. But back then, in the US, it wasn't. Then, you would ask around of your friends in ARL. Anyway I got this letter and I wrote back and said, yes, I would like to express an interest, a phrase I hadn't encountered before in this context. Then two days later I wrote again and said, well maybe you could send

me details of what the job involves. [Laugh] There was long silence and then I got a letter saying, they thought they would look at candidates a little closer, geographically, first and they had done that, and they had found a candidate—one candidate--they liked and he had turned them down. So, would I like to visit Purdue if that was convenient? As if every young librarian in the north of England happened to be passing through Indiana at regular intervals. [Laughter]

RW – Not offering to pay travel expenses I assume...

MB – No. That did not come up. That was not mentioned. What they may have known was that the Graduate Library School of Chicago University had an annual conference on whatever was the hot topic of the year and that year it was to be on operations research applied to libraries in August 1971. Don Swanson and his colleagues were involved. To do that they had to involve Lancaster. So they wrote to my boss, Mackenzie, and invited him to come to the conference and give a paper. But he had a commitment to a family holiday in Sweden, so I agreed to go on his behalf. I wrote back to Purdue and said, well as it happens, I will be going to Chicago and so I could visit. That was arranged. I set up a trip visiting different places, including the Library Research Center at the University of Illinois in Champaign-Urbana, as well as Purdue. And I got a British student guide to visiting North America that said be careful what you say about potatoes when you're in Boston. [Laugh] Two days before leaving I got another letter from Purdue saying do not come that week we want you to come a different week. So I flew to Washington anyway and holed up with a friend in Reston, got on the phone, and managed to rearrange the flights and went to Purdue. That was an experience. It was swelteringly hot. I stayed with Ferd Leimkuhler and he was able to fill me in on some of the background that was going on. The position involved supervising four heads of department: Acquisitions, Cataloging, Serials, and the library automation effort. Three of those four were candidates for the position I was interviewing for and all four of them were old enough to be my father. That is what I walked into. I have never encountered such radiant hostility as I got from the wife of one of those four. I was interviewed at length by each of them and then, by lunchtime I was like a wet rag and they took me out to lunch and sat around me and the interview continued. [Laugh] But they had been passed over before I got there and they knew it. The one with the angry wife left and has since died. All four of them have died, actually. The remaining three treated me very well.

On March 14, 1972 I landed feet first in Indiana, rural Indiana, with my wife, my son, my daughter, and the cat. The cat got lost in transit but eventually got there.

My wife and I took this move very seriously.

RW – She didn't ask about malaria in advance?

MB – No. We had to do that for South Africa recently, but not Indiana.

The key to it was in part psychological. We knew enough to know that we were going to a strange foreign country and any similarities in language or other were sort of accidental. Indiana was not another county of England, that we knew very well and we very conscious of that. Second, if you go to some foreign place you had better be polite to the natives and we were. I went native in a big way. I bought the works of James Whitcomb Riley, the Hoosier poet. I got a great kick out of all this. I noticed that people who went to Purdue from the East coast really got under the skin of the locals by complaining that West Lafayette was not like Boston. And thirdly, I only had a temporary visa, because the Purdue bureaucrats had not acted quickly enough. I had a temporary visitor's visa, a "Distinguished Intellectual Visitor" visa, which mandated me leaving the country in twelve months. And, really important, psychologically, I worked out I could get back to England in thirteen hours, if I needed to. [Laugh].

It was an incredible opportunity for a young English librarian to work in a million-volume library. They did not have many in England. The head of technical services was responsible for about sixty staff. I had hardly supervised much more than a half-time secretary. But even if it was a total catastrophe, it would look wonderful on my curriculum vitae if I went back to England. So I saw this as a totally no-risk adventure and we went on those terms. Another thing was that my wife and I knew that a move of this kind often wrecked marriages. It was the tail end of the so-called brain drain. Very often, the husband was

in heaven, with lab facilities and support that he had never dreamt of, and the wife was miserably homesick and lonely and sooner or later would go back to mother. This happened a lot.

RW – And no friends.

MB – With my wife being Austrian, she was already in a foreign country in England, which she liked. We resolved, explicitly, that we were not going to discuss whether this was a temporary visit or a permanent move, because we knew other people had done it and it is like picking a scab. We thought that if we refused to discuss it, the decision would make itself. A year later it was clear we wanted to stay. That is advice I have given to other people since.

Now, Purdue libraries were as different from Lancaster as you could get. They had every kind of management problem you could imagine. The staff morale was terrible. Moriarty had been director too long. The procedures all needed modernizing. The place was stagnant. I wouldn't have lasted there long except for the fact that in the meanwhile they had found a new director. They had interviewed an energetic, effervescent special librarian called Joe Dagnese,¹⁵ who'd been at MIT Libraries.

RW – Yes, I knew him.

MB – He was not your typical Hoosier. That would be the understatement of the week. They had interviewed him and decided to hire him, but he was not there yet. I discovered, which I was not supposed to know, that this was in the works and that Dagnese was attending the same conference in Chicago on operational research in libraries. I knew that, but I did not know whether he knew what was going on and nobody introduced us. Eventually, before the end of the conference, we got together and talked. He was given the opportunity to block my appointment and he chose not to. Although he interviewed after me he got to Purdue before me. With a new assistant director, a new director, a new provost, a new university president, and some new deans, it was a climate that would tolerate change. It was everything that the Lancaster library was not in terms of efficiency and morale and modern procedures. The problems were essentially people problems and that was new for me. So while I learned about the quantitative side of planning at Lancaster, Purdue was an immersion into people problems.

At that time the Association of Research Libraries had come to the astonishing conclusion that the quality of the management in large ARL libraries was just conceivably, just possibly, just this much less than perfect so they hired Booz, Allen and Hamilton to do a study of Columbia University Libraries and then they retained them to work with ARL and Duane Webster to develop a do-it-yourself kit for internal management self-studies, the Management Review and Analysis Program (MRAP). The first three libraries were set to implement this do-it-yourself manual, but the University of Rochester Library under Ben Bowman wanted to postpone participation. Joe saw this as just exactly what Purdue needed and he fought his way into replacing Rochester in the first round.

Almost the first thing that happened to me when I actually arrived at Purdue was a meeting of the administrators of the libraries of the four state universities in a basement at Indiana State University in Terre Haute and the announcement that they were going to do a study of OCLC, whether what was good for Ohio would be good for Indiana. Joe announced that I was going to represent Purdue on this. The study eventually resulted in INCOLSA, the statewide network.¹⁶ I was very much involved with that. I was Vice President and President-elect two years running and then never got to be president because I left the state in 1975.

If you're going to do an internal management self-study like MRAP, the Management Review and Analysis Program, a big problem that affected several of these studies is that if you do not have a brand new director of libraries, you can't really do it without implicitly or explicitly criticizing what the director has done. This is very inhibiting and it in some cases it caused problems because the director--with an ego the size the director should have--did not appreciate it or felt they were misunderstood.

¹⁵ Joseph M. Dagnese (1927-1989).

¹⁶ Indiana Cooperative Statewide Library Services Authority, established 1974, contracted with OCLC to provide OCLC services in Indiana.

Purdue was ideal because it had a brand-new director. And a lot depends on the team leader. The ideal team leader would be a man from Mars—or woman from Mars—who came new to the scene and did not have any history or legacy involvement with the institution. Purdue did not have anybody from Mars but they had me, brand-new and wet behind the ears, from the UK, so I was put in charge of running the MRAP project.

We picked a broad team. Joe and I agreed that what you do not want is a committee with only one strong personality. If you have got one strong personality, you had better have all strong personalities and we did that, deliberately. They were all internal, from the library, and we had a real spectrum from extreme left radical, to extreme right-wing conservative. We would meet in a room in the Memorial Union building in a long narrow room with a window at one end and the door at the other, and a row of square tables. The tendency was to be towards the window and I would sit about six feet from the end of the table on one side. I soon realized that the other people, as is common, were always sitting in the same places. The position they sat exactly—you could use a ruler—represented their position on a political spectrum. [Laugh] The most radical was leaning back in his chair at the end on my left and the two that were extreme right were way down on my right. The most calm and neutral person sat opposite me. They were all positioning themselves exactly on this spectrum. This was an eye-opener. When I teach management...

RW – Psychology

MB – . . . I use class time to talk about where to sit at a meeting and that, once you enter into that you cannot just walk in and sit down. [Laugh]

RW – Now MRAP is going on the same time that INCOLSA is getting started?

MB – Yes.

RW – So you're running both projects.

MB – Yes. And modernizing...

RW – Who is taking care of tech services in the meantime?

MB – Me.

RW – From two to four a.m.?

MB – Oh, I was totally exhausted and rarely got to bed before midnight. But I soon disabused myself of the fact that I could do much directly. It was a situation that forced me to recognize that management is the art of making things happen through other people. I developed some techniques there that I have used ever since. One is that we would have a weekly meeting of the people who reported to me, canceled only if it was inconvenient or if there was no agenda, every week at the same time, and we discussed whatever anybody wanted to discuss, including me but not only me. A second rule, I met one-on-one with each one every week. I had a little set of pigeonholes and anything I wanted to talk about with Bob or whoever, I put it there, and when we met I would get it out and go through it. They would bring their problems at the same time. This was partly a way to make sure that I did have contact with people who tended to keep to themselves and in one case it was to prevent having to take things up with him every day.

Another principle that I have always believed in is that people do not really like to be surprised. They like to know what is going on that affects them. So that means a lot of spade work. Also—and this was really important when I got to be Dean at Berkeley with the faculty—if you have got a tense situation, you do not want to bring things to faculty meetings unless you have got a solution. You are more likely to get a consensus if the problem is already worked out.

Another thing I did is, which I later discovered IBM does—they call it an executive interview—I called it, jocularly, a “philosophical discussion”. The court jester can get away with things that more serious people cannot. First it was with the people who reported directly to me but then I extended it to the people who work for them. This was a very calculated move. Each year I would write a memo and I would say, look, I know you are busy and I know it is never convenient, but we tend to be preoccupied with the problems of the moment and I would like you to please agree to spend an hour with me in which we will not discuss any current pressing issues. I would like you to please address two questions: One,

what should we have learned from the past two years about how we do things here. Second, what should we be concerned about with respect to the next two years, either to embrace or to avoid. Then I did the most difficult thing for an administrator, I listened. I always scheduled this at a different time of the year from either the budget or their personnel evaluations, so that they would not contaminate it. I learned so much that way. They always had lots to say. The first two times, especially the first time, there was a torrent about themselves and the insults they had received and the experiences they had had. It was autobiographical on their part. I learned so much from them on what was bugging them and how they ticked. After a few years they had less and less to say that I did not already know. This venting of the noxious gases went a long way towards reducing tensions. One of the reasons I did it is that if you are an administrator sometimes you have to take positions without consulting people and it is really good if you know what people will stand for and what they won't or what the consequences will be, before you take the position. And this proves to be a very effective way of learning that.

I had one experience that really got to me. It was not somebody who reported directly to me, it was somebody who reported to them, a professional librarian. There was a particular problem. We were buying duplicative back runs of journals because they were purchased as if monographs but actually they were serials. There had been too many cases where both the Serials department and the Acquisitions unit, which did books, both bought the same back-set, unintentional duplication. I decided, given the chemistry of the situation, not to ask the two heads of department, but I went behind them—openly, deliberately—I went beyond them and asked the help of a librarian that reported to each of them to make a committee of two to do it. One of them did a splendid job and the other did not do much, but was necessary for balance. She brought the report to me—handed it to me—and I said, thank you so much, I am really grateful, I need to read it and study it and I will tell you what my reactions are. I am very grateful. She stood to attention and said, “Dr. Buckland, I really want to thank you for listening to me.” That was such a reflection of the paranoia and the atmosphere that had been engendered under Moriarty. What I learned from all this is that people will tolerate an enormous amount if they believe that you will listen to them, even if they do not agree with what you do. So, just as I learned a lot about quantitative science and planning at Lancaster, I learned an awful lot about human nature and the people side of management at Purdue.

Then there was a huge problem, which I understood as also being a problem of expectations management. In the middle of the MRAP study we discovered an expensive problem. All of the support staff positions were classified into position titles and steps. Each step had a range and the idea was that on average people would be at the midpoint, overall, statistically. They weren't. They were at the bottom, systematically, statistically. This was not what was intended. To correct this would require giving out increases that would cost money in a difficult economic time. I took this up with Dagnese and we decided there was a moral imperative. We had to do that, even though it was a really inconvenient time. That was the litmus test as to whether we were serious about internal management reform. In the meanwhile, I had proceeded by picking off little problems. It was mostly a matter of the procedures not being documented and not understood and/or not consistent. So I would pick a little area and I would talk to the people and I would come up with discussion paper. I did not use *position paper*, I used *discussion paper*, which is less threatening. I would put out a discussion paper on what the procedures might be and who would be responsible—elementary clarification—and then it achieved consensus. I did this and I was feeling bad because I had not got very far in the first nine months or so. Then there was a staff meeting and one of the most respected librarians went into a tirade: “The pace of change is much too fast around here!” [Laugh] Because people do not like to be surprised, when the final MRAP report was officially submitted it had a hundred recommendations in it and it did not surprise anybody—and that was intentional. In a sense it was a non-event. I believe that the Purdue MRAP study was closer to the original spirit of MRAP and probably a good deal more successful than the others in terms of what was intended.

RW – Dagnese was encouraging in all this?

MB – Absolutely. Absolutely. He said to me—or I said to him, I don’t remember—there is only one thing wrong with this place and it is everything! [Laugh]

RW – Was this before or after the study?

MB – During. We depended very much on each other. Different though we were in many ways we got on very well together and we needed each other too.

RW – Yes.

MB – Neither of us were Hoosiers so that may have helped in dealing with each other.

[A short break]

MB – We were finishing off on Purdue...

RW – Right. Purdue sounds like a really great experience, in terms of managing and getting involved more in research...

MB – Yes. The research I did there was not really research. It was either management innovation or it was writing up stuff from Lancaster. I did a lot of that. When I wrote my doctoral dissertation I decided very early on that this would make a publishable book and in terminology we did not use in those days before word processors at a certain stage I did a sort of “save as”. I set it aside and then I edited a copy into a proper dissertation, written expressly, though I never told him, for one of my Sheffield advisors. He was a faculty member in economic analysis. I thought, what would this guy want? That determined what I included, what I could take for granted, and what needed to be explained and in what level of detail. I wrote it for him personally. I never told him that. Then, as planned, I went back to the earlier version, and worked that up into a book for publication in libraryland. It came out as *Book Availability and the Library User*, but that rewriting I did at Purdue. I also working with Don Kraft and Tony Hindle We edited a *Reader in Operations Research for Librarians*.¹⁷ Eventually the copies got remaindered and sent to China.

RW – Oh? It was a pretty hot book for a good long while as I recall...

MB – Yes.

RW – ...in terms of selling.

MB – I don’t even have a copy anymore.

RW – No?

MB – But it had a tutorial, which we gave to somebody who didn’t know anything about Operations Research and she did not understand it, so we had to go back and rewrite it. I did a lot of writing while I was at Purdue, but it was mainly working through the materials that I brought from Lancaster.

It was a wonderful experience. I learned a lot. As at Lancaster it was just a lucky fluke that I was just in a very good place at a very good time. I should say that knowledgeable, well-informed people patted me on the head before I went to Purdue and said, sonny boy I wouldn’t go there if I were you. But they were wrong because, although it was in a terrible state, it was just at the point where it was ripe for improvement. It was just the right time to go in and I got to go there. Later I met the candidate who turned the job down and I thanked him. [Laugh]. Anyway, it was very engrossing. I was very busy.

RW – Well in terms of library networks, great experience, as you were developing that library automation, really getting involved with that, particularly personally, in terms of learning management issues.

MB – Yes. The library automation was largely moved out of the library. The library systems had been developed by Donald Hammer.¹⁸ He left Purdue and it was turned over to Harry Hirschl, the campus

¹⁷ *Reader in operations research for libraries* (1976). Peter Brophy, Michael K. Buckland, and Anthony Hindle, Eds. Englewood, CO: Information Handling Services, Library and Education Division.

¹⁸ Donald P. Hammer (1921-1998) later became Executive Director of the Information Science and Automation Division of the American Library Association.

Director of Administrative Computing, who really understood systems development. It was a split arrangement between the Library and Administrative Computing. I learned a lot about good practice in terms of careful, thoughtful design of systems, having documentation, and getting people to sign off. All that was new to me: Tedious, tiresome things that constitute good practice.

Anyway, we went to Indiana and we loved it. We bought a house right away, even though I had only got a temporary visa. The year expired and there I was in the country illegally. So I wrote a memo saying that I understood that my visa has expired and that I should be out of the country but I remained on the advice of my employers and I got Joe Dagnese to sign it. I kept a copy. Eventually I got the permanent visa and I was not deported. [Laugh].

BERKELEY

MB—I got home one day and my wife said somebody called. There is a message here to call this number. I called the number and it was Ray Swank whom I had met in 1969 when we went to visit my brother in Vancouver and came via San Francisco and spent a day or two in Berkeley. I gave a talk and met some of the faculty. It was Ray Swank.¹⁹ I called him back. There was no indication of what it was about. He said, how would you like us to pay for you to visit San Francisco? I said, that is good. What is the catch? He said, well, you would need to give a talk. So I said, fine, what is the catch? He said, we will pay for your wife to come too. So I said, fine, what is the catch? He said they were looking for a Dean for the School of Librarianship, which I had not known. So I said, OK. I will come and I will give a talk.’

There was a connection here because Ferd Leimkuhler had a sabbatical and, unusually for a professor of industrial engineering, he had gone to the Berkeley library school for his sabbatical. He had a hand in this, clearly, as he had had at Purdue also.

The Berkeley School of Librarianship, as it was then, had problems. There was internal conflict. That is an understatement. There were strongly divided opinions as to which way the school should go. Ray Swank was a giant, intellectually and as a person. He was very shrewd and he was proud of the fact that he could claim to be the only person who had turned down the deanships of Columbia, Chicago and Berkeley. [Laugh]

RW – Was he the dean at that time, at Berkeley?

MB – Yes, he did become the Dean.

RW – Okay. After you, or before?

MB – He was the Dean well before me.

RW – He was the Dean when he called you?

MB – No, he wasn’t. Actually, in 1971 I had two letters almost the same day. One was from Patrick Wilson from the Berkeley library school asking if I would be interested in a faculty position at Berkeley. I wrote back and said it was inconceivable that I would leave Lancaster. And another letter, from, I think, George Bobinski, was about a faculty appointment at SUNY Buffalo library school. I wrote back saying no, because I wanted to move back from research into library operations. The irony was that in fact I did go to the Berkeley library school.

The Berkeley campus had done a Graduate Council review of the School. This is really serious. Accreditation reviews are nothing compared with these reviews. They really determine the fates of departments. It was nicknamed the Wheeler Report, after the chair, John T. Wheeler.

RW – John Wheeler the physicist?

MB – No, he was a professor of accounting.

RW – Oh, okay.

¹⁹ Raynard C. Swank (1912-1995) was Dean of the Berkeley School of Librarianship from 1962 to 1970 and continued as Professor.

MB – It was an interesting report and it was dated 1974. In effect it said that preparing good librarians is a really good thing, but, first, other people are doing that; second, there are needs in the organization of information outside the libraries that are not being attended to; and thirdly, if you are a research university you should not define the discipline by an institution. So the School should do something new and different. It should redefine itself. It should involve the word information. We don't know what it is but it should be done. This is my characterization of the Wheeler Report and everybody agreed, except, as at Lancaster, nobody had a clear idea as to what it really should be.

Swank had engineered this in the sense that when he was Dean he started the recruitment of faculty without a background in librarianship who nevertheless brought expertise the school would need in the future: [M. E.] “Bill” Maron, William Cooper, Victor Rosenberg, Michael Cooper, Charles Bourne. In varying degrees these people didn't fully appreciate being called “Professor of Librarianship” and this was the period of tension between librarianship and information science. There was another pole of contention over social responsibility and more traditional views. So everybody agreed there was a need for change but they did not agree on what the change was. There was appalling fighting inside the faculty. The name of the school was a matter of contention too. They solved that by formally agreeing that it would be placed on the agenda of the second faculty meeting after the new dean, whoever that was going to be, arrived. [Laugh].

There were four short-listed candidates. I only remember one of the names and he withdrew. It was Dick Dougherty who was the University Librarian. Basically the other three candidates either withdrew or talked themselves out of the job by saying the wrong things at interview, like saying the faculty ought to go on a warm and fuzzy retreat. [Laugh]. They expected me to talk about operations research in libraries. That was a cool thing. But I didn't. I talked about the people problems of modernizing a stagnant organization. Right from the heart. This was about the MRAP study at Purdue and actually it hit home because, in a less severe way, this was what was affecting the Berkeley library school. So, like a demolition derby I just lucked out by being the last person standing and was offered the job. I thought this was a little too good to turn down. In spite of having decided long ago I was never going to be a professor, I had, nevertheless, an interest in library education and the notion of running a library school had occurred to me as something that might be interesting to do one day. But I should be very clear and say that I was hired as—and I saw myself as—a turn-around man. I did not see myself being hired as a professor. It was my job to go in as Dean and change the situation, whether or not I stayed on as a professor.

RW – Now you did not know about these troubles prior to getting there...

MB – I learned about them.

RW – But after you took the job.

MB – No I knew about them...

RW – You knew about them in advance?

MB – I knew about them before I accepted the job.

RW – Yes? Because somebody told you or... how did you know...?

MB – I did some due diligence, shall we say. They were very open about it. Patrick Wilson was the dean at the time and he was very open with me. He was a very shy, skeptical man, but honest.

RW – So he told you about all these differences...

MB – They were not secret. No, I knew. I did not know how bad they were but I knew. I knew what I was letting myself in for. Yes. It was a management challenge. In my vanity I got to see myself as a bit of a turn-around man. I had been involved in the creation of a library research unit at Lancaster. Joe Dagnese and I had this huge turnaround job at Purdue and now this library school wanted new directions.

RW – And these were also, like you said, the times when the library and information folks were fighting each other like crazy.

MB – They were, but it was less of an issue. It was present but less of an issue at Berkeley, partly because of the intelligence of Ray Swank and of Patrick Wilson who both refused to accept it.

RW – As a dichotomy.

MB – Yes. Both Swank and Wilson and I.

So you library and information science. Show me a division that is intellectually defensible. You cannot do it. You cannot do it. It has nothing to do with an intellectual assessment of the issues. That was partly why it was so stultifying and I will talk a bit about that tonight.²⁰ Fortunately the faculty had sort of scared themselves and they agreed they wanted to bury the hatchet before I got there. That was really important. One was given a makeshift assignment elsewhere on campus and then left. That simplified things. I did not know better than to approach it in the same way that I had at Purdue. I had my “philosophical discussions” one on one and learned a lot. I did not bring solutions, except for a few ideas on teaching about audiovisual media. I was very anxious to avoid fights at faculty meetings. It takes a lot of time and schmoozing to work out where there is a consensus before you go to a faculty meeting, but that is what is needed.

RW – You did a lot of mediating, one on one.

MB – Yes I did a lot of one on one. And I did a lot with discussion papers, not position papers. I started writing these little discussion papers and pinning them up on the bulletin board.

RW – Aha.

MB – This was new. They were tired of fighting and they wanted some resolution and some forward movement. And two things happened that worked out.

One was, they said to me, at the next faculty meeting we have to address the title of the school. We had a system which I really liked and that is that the faculty elected a Chair of the faculty who chaired the faculty meetings and who was different from the administrative head of the school. Berkeley makes a big distinction between the administration and the Academic Senate and technically a faculty meeting is a meeting of a subdivision of the Academic Senate, although de facto it is largely an administrative meeting largely. Perry Danton who had been Dean from 1946 onwards...

RW – Well, we’ve ended that tape.

MB – Already? How time flies when we are having fun.

RW – We have a choice. You are supposed to be in with the doctoral students at 3:30. We could quit now, or go another thirty minutes.

MB – Why don’t we go another thirty minutes?

RW – Okay. I just didn’t want to take up all your time in case you wanted to take a walk.

MB – No, I am having more fun talking about myself. I am honest enough to admit that. [Laugh] I never could bring myself to write a diary or keep notes.

We were talking about the fact that they had scheduled the topic of the name of the school for the second faculty meeting after the new Dean arrived and we had a system whereby there was a chair of the faculty different from the Dean. So I talked with the chair, J. Periam Danton, and we came up with the following scheme. We announced to the faculty that we would put the topic on the agendas of two faculty meetings. At the first one we would discuss but not decide and then the next faculty meeting we would decide but not discuss. So in the first one, everybody said the same old, same old and paraded these tired ideas around. They felt compelled to make these arguments. Nobody was listening but they got it off their chests. That was the first one. At the second meeting Danton announced that we were going to decide but not discuss. The amazing thing is they went along with it. So, the first thing was, please would everybody propose a name. We will imagine that the Chancellor has gone berserk and mandated a change to the name of the School. On that assumption, what would people like? Eight different names for the school were put up on the chalkboard, very quickly. OK, now each person gets one vote. Forced to a choice

²⁰ Deans and Directors Lecture, University of South Carolina, April 7, 2011. A revised version was later published as “What kind of a science can Information Science be?” *Journal of the American Society for Information Science and Technology* 63, no 1 (2012): 1-7.

<http://people.ischool.berkeley.edu/~buckland/whatsci.pdf>

between these eight, which one would you like? It was immediately apparent that only three had non-trivial support so five were erased. OK, next vote. Of these three, if a change were mandated, which would be the least unsatisfactory?

RW – Least unsatisfactory?

MB – Yes. If you had to choose between these three, which one is it going to be, given that we have been mandated to change?

RW – OK.

MB – So, another name was erased. Another vote. Given these two, which could you live with, of these two? And one was erased. So we were down to one. Whoops, we have just got news from the Chancellor's office that the Chancellor has recovered from his mania and he has retracted his mandate. So do you want to keep what we have got or do you want this one that is on the chalkboard? They opted for the one on the chalkboard. That whole process took only twenty minutes and after that it was not an issue. [Laugh] It is amazing what process will do. Anyway, I now think we got it wrong because it was too long: School of Library and Information Studies. Nobody could remember that. People would say, oh, you are in the school of library... and it sounded more retro than librarianship. Anyway that is how that happened.

We started recruiting new faculty and I have strong views on faculty recruitment. One of them is that there must be a discussion of programmatic need prior to consideration of any candidates. Now, that was not done later on and I feel that caused problems. I feel very strongly on programmatic need and I am strongly opposed to the "Let's hire Great Minds and let the programmatic need take care of itself" approach. People are on different positions on that and I have a strong position on programmatic need. We started hiring faculty and revamped the curriculum and took great pains to avoid offending the alumni. After four years I worked very carefully on a report on what we were doing and why—and why this is what good old Mr. Mitchell, the founding Director, would have done.²¹ We sent that out to alumni, and we sent it to other schools. It had more effect on other schools (this was 1980) than on the alumni.

RW – The name change was '78?

MB – '76. It was right away.

RW – Right after you came?

MB – It was effective July 1, 1976. I started January 1, 1976 and we took care of it my first or second month.

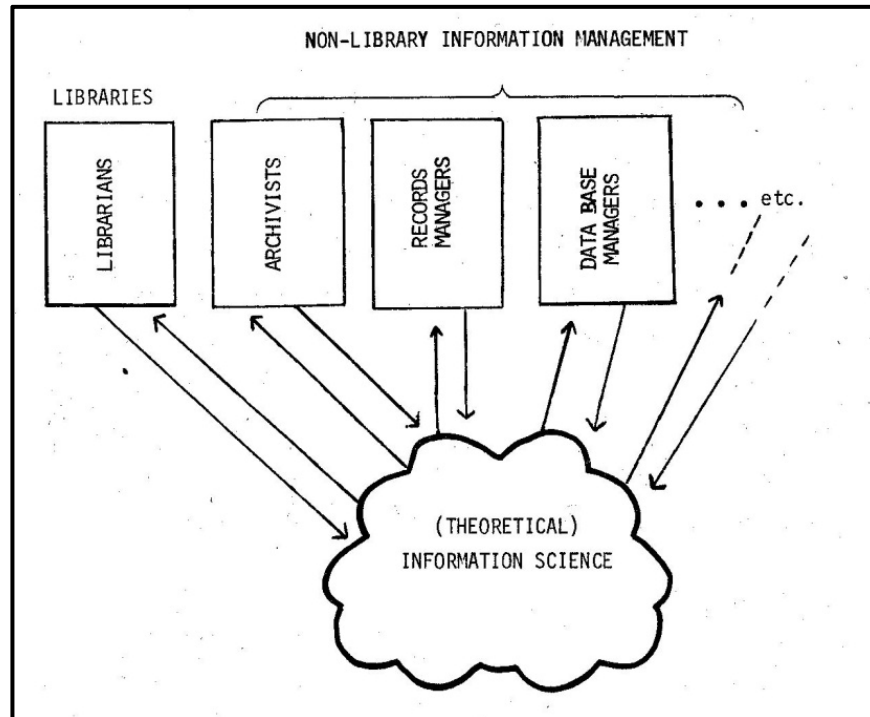
The other thing that was really important was how to frame the discussion about the scope of the school. We did this with a diagram that is in the report to alumni and anybody interested should look at that report and that diagram. It is probably published elsewhere too.

There was a library – information science polarization and polarizations are really dangerous. Charles Carter, the Vice Chancellor at Lancaster, made a nice remark. He did not mean this as an ethnic joke. He said, if you have a conflicted situation, what you need to do is to introduce another pole. That will confuse everybody and then you can make some progress. [Laugh] And that is good advice.

So, we started with a diagram that had a box which said 'Library.' [See Figure.] This is an institutional context and that is what the school has traditionally prepared people for. Then, below it and a little to the right side was a fuzzy cloud, with 'Information Science' written in it. It was not very clear what this included but it was theory and it was ideas and it was methods and it was loosely "information science". Then it was observed that these are different in kind, as reflected in different shapes and different borders. Now, if you are preparing people for libraries, what other institutional context might you prepare people for? So you put another box next to the 'Library' box which says, 'Archives' and then you do another one that says 'Corporate Records Management' and then you do another one which says

²¹ *A Report to Alumni: Problems, Activities, and Aspirations*. University of California, Berkeley, School of Library and Information Studies, 1980. <https://escholarship.org/uc/item/1sx7569q>. Sydney B. Mitchell was Director from 1919 to 1946.

'Data Base Management' and so on. These represent institutional services and all are in the same format as the 'Library' box.



Then we said, we have got more information science professors per square foot than any other school. What is their role? Their role surely includes making suggestions as to how things might be done better in libraries, so put an input arrow pointing toward the Library box. Also, they should be listening to the nature of the problems, so you also draw an arrow from the Library box. So there are two arrows now: from Information Science to the Library box and from the Library box to Information Science. But then you also have arrows from and to all the other boxes, also. So if you are going to have Information Science it had better be justifying its existence in terms of listening to what is coming out of these boxes and making input into these boxes that is worth having.

That visual representation changed everything because when you said, "What do the people in these other boxes need?," the person who taught cataloging said, well, they are dealing with documents and I don't know what kind of cataloging they need, but they are going to need some kind of cataloging, so they're going to need me. And the person who taught library management said, you cannot provide information services in any context without knowing about management, so whatever the specific problems are they are going to need my course on management. I am exaggerating, but this was actually the thrust of the argument. And the people who were into user needs said, well, how can you provide any kind of information service in any context without studying the context and the needs of the people in it? So they will have to take my course. Everybody except the specialist in children's literature could identify with a need. The people who were into government documents said you have got to be joking in these other areas without a dose of government documents. [Laugh] So, instead of a polarized threat, you suddenly had this vision of a school with a broader mandate and full employment for everybody . . . except children's literature. That was such a transformation in the way the problem was being viewed that it was only a practical question of, well, which box do we pick off first? And after looking at archives, which in that time, about '76 or '77, was not ready for decent professional education like it is now. We opted for records management in addition to investing heavily in databases.

RW – Now these are all ongoing discussions by the faculty...

MB – Yes.

RW – With communication to the alumni...

MB – This was the discussion inside the faculty meetings and it was conveyed to the alumni. It was primarily an internal discussion. It changed the complexion of the debate in a political sense.

RW – I want to go back... because this situation that you're describing in terms of making the decision about the name of the school... of the dean not running the faculty meeting. Is that what you described?

MB – Yes.

RW – Did that continue?

MB – It did for a long time. It is not currently the way it is done but it did continue a long time. It had been that way and I think it is a good way.

RW – And who ran the faculty meetings?

MB – Each year, they'd elect a Chair.

RW – So the Chair of the faculty versus Dean,

MB – Yes.

RW – And the Chair of the faculty dealt with all kinds of issues except administrative issues?

MB – No, not really. They chaired the faculty meetings.

RW – Within the school?

MB – Yes, just the school. The Berkeley situation is one of the few places where a clear distinction is sustained between administrative matters and Academic Senate matters. So, a faculty appointment cannot be made without the advice of the Academic Senate at the department level and at the campus level. And a new course cannot be approved by a Dean or the President; only by the Academic Senate.

RW – And only by the departmental faculty.

MB – Just by the faculty. They can recommend it. Only the Academic Senate at the campus level, usually through its Committee on Courses. Only they can approve a course. It is not like the Big Ten universities in the Midwest.

RW – I had never experienced this until I went to work with the Chemical Heritage Foundation and discovered that Arnold Thackray did not run the staff meetings. His administrative person did.

MB – Yes.

RW – He only came in and made a presentation about something.

MB – That was probably his choice. I don't know.

RW – It could be. This is what it reminded me of. Maybe the University of Pennsylvania had done the same kind of thing you all did.

MB – Anyway, there were some other things going on in the chemistry of the situation, too. I was the youngest member of the faculty and I was only an associate professor. I kind of liked that, in a way.

Having grown up in rural England I did not see many of the Disney animal movies and so I used to go and watch, you know, *Lobo the Timber Wolf*, and such films, with my children when they would come. I went to see a film about a colony of baboons on the shore of a lake in Africa. There was this colony of baboons, or apes, whatever they were, minding their own business sitting on the beach, in their pecking order and all this. And all of a sudden there is an alien baboon at some distance that shows up and this causes a shiver to go through the community. They do not know who this guy is although he is certainly an alien. The alien baboon keeps his distance. The next day he is a little closer. He waits for the colony to settle down. They gradually they get used to him and gradually he gets a little closer. Then he goes and sits on the grain of sand underneath the lowest ranked baboon in the colony and waits for the colony to calm down again. Then he goes to sit on the grain of sand underneath the next up in the hierarchy. [Laugh]. And he does this until he reaches an equilibrium point. I thought this was so funny. I saw myself in these terms and I went back and told them in South Hall and they did not think it was at all funny. [Laugh] In a sense the outsider status helped.

The other thing that interested me is that I had received an inquiry from Patrick Wilson in 1971 and declined it. They appointed somebody else whom they probably would have appointed anyway, probably Michael Cooper. When I got to be Dean, it was five years later, and I was responsible for his tenure evaluation. He is a little older than me. I am a month younger than him. If I had gone to Berkeley in 1971 then I would have been under review for tenure. But by going to Purdue and working in a library, staying in the field, and then going to Berkeley, I was the Dean. There is a difference. One of the many advantages of being appointed as a Dean is that you also get instant tenure as a faculty member. Now I had no...

RW – Not an instant promotion.

MB – No. That took a while actually and there was a misunderstanding over that.

I had no thoughts or ideas as to what I would do after I was Dean, whether I would stay on as a professor, or what I would do. I was just not interested in thinking about it.

RW – Was there a limited term appointment made?

MB – Yes, I guess so. Nowadays it is rigidly five years and it may have been then. I do not really remember. Then the question comes, how long should you stay and when should you step down. The steam diminishes and you have fewer new ideas. The thing that I had difficulty with was personnel reviews, merit increases and promotions. When I was new, I felt as comfortable as one could be, doing these assessments on my colleagues.

The first thing I did was a reform. I made them write an “immodest statement” which was the draft of a merit increase recommendation. Nowadays that gets forwarded too, but for a while they were drafts for me to use. That saved me a huge amount of work. I did not always agree and I could change it, but I introduced “immodest statements”. At first, I felt I could do that reasonably competently. But, as time went by, I got more involved with them in discussing their work and so I felt less and less able to be impartial and neutral in assessing their research, which is taken very seriously at Berkeley. I do not know if anybody else ever felt that, but that was one thing that concerned me.

I had this vision of being on a slow-moving tram and pondering when I should get off? There is always more to do, but, on the other hand, one is running out of steam and maybe it is time to go do something else. I would tell anybody who would ask, if you have been doing something for five years, it is time to think about doing something else.

In the meanwhile, IBM had funded a huge office automation program on campus. The Berkeley Co-Principal Investigator left campus and I was asked to take it over. There was an IBM Co- PI, Horace Flatt, who ran an IBM research center and was a campus Co-PI. This was the BIJOU project—Berkeley IBM Joint Office Utility project—and that took up quite a lot of time.

A point that I have not mentioned is that, when I was at Purdue, I got a letter from the Office of the President of the University of California. The background to this is that the Department of Finance of the State of California had done a scathing audit of the University of California’s nine campus expenditure on libraries. Scathing. And while the University of California has statutory independence under the State constitution, if you are not financially independent, you are not independent, as teenagers learn with chagrin. The State said to the University, we have no confidence in the wisdom of your expenditures on libraries, so we are not going to increase anything, for inflation or for new enrollment or anything, and do not even think about proposing new buildings until you can persuade us you have got your act together on expenditures. After a while, this began to hurt because they were not getting inflation adjustments or enrollment adjustments. So eventually the Office of the President decided to do something about it. They created a position of Executive Director for Library Planning and they wrote to me at Purdue asking if I be interested in this. Because I was writing about library planning, I guess. I had a sort of high on this for about a day and a half and then I realized this was the nearest thing to being a kamikaze pilot as you could find in libraryland. I hastily wrote back and said, no, I could not go to Berkeley. They hired a man called Stephen Salmon. He started work in this role the same day I became Dean at Berkeley and he did a spectacular job. All he had to do was to transform the view of the

university libraries as being one library, one system of a hundred libraries on nine campuses, not nine campuses' libraries. He had to get approval from the President, the Chancellors, the Academic Senate, University Librarians, the professional librarians, and nominally you should get the students, also the faculty, the State Department of Finance, the Legislative Analyst's Office, and the State Senate and Assembly committees. That is all. (Laugh)

RW – Then we'd better stop there.

MB – And he did it.

RW – It is almost time. And he got all those permissions?

MB – He did it.

RW – Wow!

MB – But that is the starting point for the next installment.

RW – Yeah, right. We'll start with that. And I don't know what happened to my recording here, but it must mean that that folder is exhausted. So, we will pick up there at whatever time suits in the morning. That will give us three to four hours tomorrow.

[Break]

OFFICE OF THE PRESIDENT, UNIVERSITY OF CALIFORNIA

RW – OK. When we stopped yesterday we were right at the point of you switching to the Assistant Vice President job at the University of California.

MB – Right. The State Department of Finance had done an audit that had severely criticized the University and blocked any improvement in library funding. So the University's systemwide administration, the Office of the President, had created a position of Executive Director for Library Planning, as it was called then. They hired Steve Salmon who did an amazing job in developing a systemwide library plan which had two foundations: a University-wide online library catalog, MELVYL, and multi-campus regional storage facilities for less-used books, one in the north and one in the south. This last part was enormously unpopular with the librarians and the faculty, but the economics were compelling. At that time, for conventional library housing the construction costs were \$20 per volume and in the storage facility \$3 dollars per volume.

Steve had also been asked to step in and clean house as Chief of Staff in the Office of the President, a large operation, and almost his first step was to fire the head of personnel who dedicated her post-employment career to getting revenge.

After eight years of battling with horrendous political fights, Steve went sailing in the Caribbean with his wife and decided that sailing the Caribbean with his wife was more fun than dealing with university politics and he announced he was not coming back. But he was not willing to resign because one of the people he had fired had instigated an audit alleging he had misappropriated university intellectual property. On principle he refused to resign until he had been cleared.

There were multiple crises. One was that the first storage facility had been built but the heating, ventilating and air conditioning was not working. It could only increase humidity during one of the wettest years in memory. And somehow grit had got into the paint that was put on the shelves so it was abrading the bottoms of the books and the city of Richmond had dug a hole in the only access road. Meanwhile new legislation allowed academic employees to unionize and the librarians were the first to do this. And the prototype online library catalog, MELVYL, could be used but they could not load new records and there absolutely was not the telecommunications between the campuses to support it. So it was not a very convenient time for the person in charge to go on leave. A few days before he left, I was asked to step in and take over. They needed somebody interested in library management with experience in large libraries, who was not working for any of the nine campus library systems and who was on hand at Berkeley. So there was not a large choice. I agreed to take this on, in addition to being Dean, on a temporary basis. Meanwhile the title had been elevated to Assistant Vice President for Library Plans and

Policies. That was in addition to the big IBM office automation project. So I was busy. Actually, the IBM project was less work by then.

My teenage son made an interesting observation. He said, it is dumb to do two jobs for the salary of one. You know, in the evening over dinner you only talk about one of the jobs. So shouldn't that tell you something?

RW – [Chuckle]

MB – And he was right. I was more engaged with the challenges of the university-wide library system and how to solve them. The University made telecommunications for the library catalog one of the top budget priorities and, once the library plan had been in place, it was possible to start proposing new library buildings so that had to become the university's top priority, library buildings. I was not responsible for dealing with the buildings, but I got involved in it. This involved helping to deal with the Legislative Analyst's Office and the State Department of Finance and so on. I agreed to be a candidate in the search for a permanent Assistant Vice President for Library plans and Policies, was appointed in 1984, and resigned the deanship.

RW – Were you ready to leave as dean?

MB – Yes.

RW – You were?

MB – Yes. There was more to be done, but I felt that I did eight years. I do think that people tend to stay in jobs too long or did then, anyway. And you know, there is a limit to how many things you can do. It was the case that I had been rather neglecting my Deanly duties because of the work of the system-wide administration. It was an exhausting thing. The Office of the President is a kind of corporate headquarters. Somebody ought to do a sociological study of corporate headquarters. It is different. They were so much more oriented to Sacramento and the State authorities than to the campuses. And it was full of people who had been there a long time and had nowhere else to go. I mean there was nowhere else like it. Unless you are willing to go and work in the State University of New York system or something like that. But that is different and it is a long way away and that is not where your family is, and so on. The brutality of the politics was an eye-opener and in the end I got caught up in it. I felt that I could not do my job conscientiously without engaging in conflict with powerful others and in the end I got ground up and I went on vacation with my wife in Greece and decided that that was more fun than being Assistant Vice President for Library Plans and Policies. When I got back and was about to tender my resignation, I was told that I was going to leave.

RW – Oh?

MB – Because I was being told I was going to give up the job, I got six months leave on full pay.

RW – And this after what period of time?

MB – Four years.

RW – So some period of time as interim and then as...

MB – I served one year as interim and then basically three as the real thing, 1983 to 1987. There were enormous conflicts over telecommunications because telecommunications was deemed an administrative responsibility by the administrative side, not to be done by the academic side. They operated on a recharge basis. They only did what somebody would pay for. I had a budget line of a million dollars a year from the state to pay for telecommunications. We wanted to build a packet-switched network and they did not. They wanted to use the OSI stack. In Edwin Brownrigg and Clifford Lynch we had the talent to build the first packet-switched intercampus network and so we did that unilaterally, sitting on a million dollars a year income stream and running a really successful intercampus network designed with redundancy, satellite-linked between the north and the south, piggy-backing the State Highway Patrol network, with direct line of sight radio where feasible, like Berkeley to San Francisco, and leased telephone lines. Each campus had two paths in using different media. It was amazing.

Steve Salmon had built a computing facility to run the online catalog which became an issue in these conflicts. I had to expand the computer room, the chilled computer room, and I was denied

permission. You could make some leeway by buying better disk drives with higher capacity, but ultimately we had to stop loading catalog records into the university's online catalog because I could not get permission to expand the computer room. That created such a crisis that my supervisor organized a retreat to address the many problems and during that retreat these responsibilities were taken away from me without warning.

RW – By someone else in the President's Office...?

MB – Yes. I was annoyed by that.

It was a very difficult role. I learned a lot. I must say I learned a lot. Supervising a computer center is not an easy thing, because they know so much more than you do.

RW – OK. Now, Michael, were you all building this packet switching network in imitation of what the folks were doing with the developing Internet, or the NSFNET or...?

MB – I had extraordinary talented people working for me, notably Edwin Brownrigg and Clifford Lynch. Brownrigg was the Director of the Division of Library Automation. Steve Salmon had hired him. And Ed had hired Clifford Lynch, who was quite young then. Brownrigg and Lynch were an extraordinary team. Brownrigg was very much into radio technology and packet switching, Clifford was this sort of prodigy at computing, and they worked together. They had different emphases. They worked together and they were very effective at leading a large support team. It is contrary to all reasonable expectations that the Office of the President could develop and create a service like this, build it. Bolt, Beranek and Newman (BBN) were our attending consultants and it was just done, largely under the radar, so to speak.

RW – Under the radar of the folks there, you mean.

MB – Yes. And they could not do much about it because we had the income and the talent and the need. The online catalog was actually the University's first application requiring non-stop real-time intercampus communications. Everything else could be done batch mode.

RW – And where is the income stream coming from?

MB – The State of California.

RW – Through tuition and such.

MB – From the State to the University. It was made a University priority and the Legislative Analyst—these are the meanies—when we made a presentation to him, said are you sure that is enough?

RW – [Chuckle.]

MB – So it was a line item in the University's budget. That is the next best thing to an endowment.

RW – And this is for all of the University of California system?

MB – Yes. There were nine campuses in those days. Each campus has its own personality and the centrifugal tendencies were extreme. Each of the University Librarians tended to have a higher loyalty to their campus Chancellor than to the system and you had campus rivalries.

RW – And how did you deal with all these internal politics?

MB – With a good deal of wear and tear. And then you had the faculty's distinct voice and the campus administrations' distinct voice. Nine distinct voices. But there was an imperative. I mean there was a kind of blackmail by the State: Do not even consider asking anything for library construction or any improvement for inflation or workload for library services until you have a coherent cost-effective single university-wide library plan—and then do it! I mean, that was the reality. And much as people didn't want to know, that was the fact.

RW – Who was making this demand?

MB – The State.

RW – The State was?

MB – Yes.

RW – Through?

MB – Well, the Department of Finance and the Governor's Office.

An episode I remember: At UC-Davis, the library had done a weeding operation. All the books that were rarely used, they put little slips of orange paper on them. The timing was unfortunate because

budget analysts from the State were going to do a site visit of the library. The two case-making proposals were to be Davis and a brand-new library for the UCSF medical school. The University of California at San Francisco is a medical school only: medics, doctors, nurses, and so on. The other test case was at Davis, where they had a U-shaped building and the plan was to turn that into a complete box by putting an extension across the gap. These were the precedent-setting proposals for getting library construction going again. We were not allowed to propose them until we had built the Northern Regional Library Facility, for storage, to which the northern campuses had to shed hundreds of thousands of volumes, remove them from the campus and store them by size and in accession number order in this facility, with enormous commitments in terms of delivery. It formed a package with the online catalog, you see. So these were crucial precedent-setting building proposals.

In San Francisco, the case was fairly straightforward. Library conditions were appalling. When there was a site visit there, they would take them into the library through the animal labs with the stink of the animal urine. One constraint was a policy that you were not supposed to build any building with more than two years projected needs. In San Francisco the architecture of the site meant it was cheaper to build a bigger building than do it in two phases, one now and one later. So that was nice.

At Davis, there was a site visit by budget analysts from the Senate Budget Committee and others and this was carefully orchestrated and rehearsed. But before we got there you had these areas of the library that were waving fields of these little orange slips which indicated these books were not being used. I tried to get them to take them out and they would not do that. I tried to persuade them to put up a sign saying "Yellow slips indicate our readers have enjoyed these books." They did not realize this was a joke and they were not willing to go with it. What I did get them to do was do some research on which route for the walk through the library minimized the visibility of these yellow slips. Even so, at the end of that day, the analyst from the Senate Budget Committee looked at me and said, "You are not serious about keeping these books, are you?" It was so distant from where the faculty were. But it worked and for a number of years 30 percent or more of the university's building budget was for library buildings. There was a lot to catch up. Steve Salmon had done his work extremely well. He did not get the credit he deserved. He and his wife sailed off around the world and I never heard from him again.

Now the plan was a ten year plan and it had commitments, agreements, in it that the State would honor, including a special inflation adjustment for books which was higher than the general cost of living adjustment. We worked with the State Librarian, Gary Strong, to make sure that the figure was not lower than it should be. The State committed to adjustments for increased enrollment and there were other formulaic provisions, so this plan was generating money like a fire hose and new buildings. The State honored it. The State overlooked the fact that it was a ten year plan and ten years had gone by. My task, part of my task, was to do a sequel plan for the development of libraries. I had to do the same kind of politicking that Steve did except the ground was by now much better prepared. A lot of this had to do with the role of digital resources to supplement or even replace paper. This required a lot of changes in the way people thought about libraries. For example, reference librarians needed to talk to the database people because reference books would be-

[Interruption. Some parts may be missing.]

RW –Alright, you describe the end of this job as not at your behest. So, what can you tell about what happened and why it happened, those kinds of things...?

MB – To the extent that I know, the University Librarians got angry. Well they had a difficult situation. I was unable to carry the University Librarians along with me in what I wanted to do, for quite compelling reasons. It involved a massive shift from their campus autonomy to being part of a broader plan orchestrated by the Office of the President. So, in a way, they were losing out politically but gaining economically. These were talented, headstrong people. Their support for what I was doing varied. The bigger campuses were less cooperative than the smaller ones, as you can imagine. And it was also clear

that I had not been entirely successful in the battles within the Office of the President, which were brutal and ruthless beyond anything I would have expected.

RW – Over money, or authority, or control?

MB – Specifically, control of telecommunications and the Division of Library Automation, which is most of what I did, were unilaterally taken away. The conflicts had escalated to the level of Senior Vice President. There were two Senior Vice Presidents: One for Academic Affairs and one for Administration. I reported to Academic Affairs and telecommunications and administrative computing reported to Administration. Eventually the President got tired of this and had a meeting in which he told the two Senior Vice Presidents that they had better get their act together and not bother him with these conflicts or else he would be looking for two new Senior Vice Presidents, or so I was told. This resulted in the Division of Library Automation with its computing operation and its telecommunications operation being reassigned from the Senior Vice President for Academic Affairs, whom I reported to, to the Senior Vice President for Administration.

I was left with a much smaller role, responsible for policies and planning, and an advisory role in construction of libraries. Which I did. But, as I said, having gone on vacation with my wife, driving around Greece and deciding that was more fun than dealing with the Office of the President, I came back to resign. I had retreat rights to the School as a professor. But before I could resign I was told that my appointment was ending.

RW – Appointment as Assistant Vice President.

MB – Yes.

RW – Right. Now, ordinarily, from what I know about other situations like this, the pressures, the political pressures, come from companies like AT&T, telecommunications companies and IBM and such. Was that the case here?

MB – No, not at all.

RW – It was all coming from the individual campuses...?

MB – There was a power struggle within the Office of the President and there was great tension with the campuses. The well-being, health, and employment of the University Librarians was in the hands of their campus chancellors, not the system-wide administration. Evolving technology and economic and political pressures from the State mandated a more integrated system-wide structure with the adoption of new technology as well as the long-term consequences of the audit. This mandated a more integrated system. Inevitably, this increased the role of the Office of the President, the corporate headquarters, which for library purposes was symbolized by me. The University Librarians were losing out in terms of autonomy and were being forced to have a split loyalty between the people who hired and fired them and the Office of the President where they knew I was having difficulties delivering. So you can see this was a difficult situation. To me, there was an imperative. The resumption of proper funding for libraries was absolutely conditional upon the implementation of Steve Salmon's plan for library development and that was based on two non-negotiable planks. One was the online union catalog for the hundred libraries of the nine campuses. From a policy point of view, a student at San Diego should be able to use books bought at UC Davis, and you cannot do that unless you know what is there. Incidentally we estimated we would save a million dollars in labor costs if you stopped filing catalog cards. It is a huge library system. It is a great mountain range in the university landscape, comparable to all the university libraries of Australia, as I told the Australians.

I did a wicked thing once. I was in London and I had lunch with the head of automation for the British Library and I leaned over and said, "The University of California is always willing to cooperate with smaller libraries." [Laugh]. I did so enjoy doing that. I apologized immediately. The University of California is a great 800 pound gorilla. You can do things if you are an 800 pound gorilla that you cannot if you are a small chimpanzee.

So, the unhappiness of some of the university librarians led in my being sent back to the Berkeley campus and my position being eliminated. It did not surprise me that it was not long before they had to

reinvent my role and hire someone else to do what I had done. They renamed the Division of Library Automation and called it the California Digital Library.

RW – This is Clifford Lynch then.

MB – Yes. I don't remember when they changed the name. He reported up to the ladder for Administration. His talent made him de facto in charge of these operations. Brownrigg left earlier. Then Clifford Lynch was touched to go to direct the Coalition for Networked Information. He had completed a PhD in his spare time in Computer Science, on the Berkeley campus, while building MELVYL and building the network and everything else. It was on why relational databases could not handle bibliographical systems at that time. He wanted to teach but his travel is incredible. He sort of lives on airplanes. His office is in Washington, D.C. and his home is in Emeryville, next to Berkeley. He could not teach because he could not commit to being in Berkeley the same day two weeks running. So we cut a deal that we would do it jointly. If he was present he would hold forth and if he was not I would fill in. This came to be known as the Friday Afternoon Seminar on Information Access, now in its twenty-first year, on topics in information access every Friday afternoon at 3 p.m. It is at that time because when he worked at the office of the president that was the most convenient time for him to get off, 3 p.m. on a Friday. It is an antisocial time. Nobody would dream of scheduling anything then, but for people who work, it is a good time.

RW – This is a for-credit course?

MB – Yes. Optionally.

RW – Anybody can sign up for?

MB – Any registered student. Well, it was intended for our own graduate students but everybody is invited. I put out a weekly announcement that then gets widely reflected. In fact many of the people who come are not from inside the school. Many of them are from on campus. The attendance is modest. It varies greatly with the topic and the speaker. A lot of the speakers are due to Clifford's contacts.

RW – Have these been recorded ... anything like that?

MB – No, nothing. Today, Clifford is filling in because the speaker we wanted could not make it, and he is going to do a report on the Coalition for Network Information conference earlier this week. Next week Marcia Bates, who is retired and lives near Berkeley, is going to give her ideas on how humans do information retrieval and we have got a couple of slots that we have yet to fill at the end of the semester. I digress, but that has been part of the scenery.

We were just closing out my period at the Office of the President. One thing worth mentioning is that here I was, having negotiated a revised library plan. I drew on my experience with the Management Review and Analysis Program at Purdue: People don't like to be surprised; people do like to be consulted, skillful writing can often lead to the resolution of conflicting situations . . . Eventually I had an updated version of Steve Salmon's plan and the question was what to do with it. The decision, which I fully supported, was to suppress it. There were two reasons for this. One is, when people talk about plans and planning, they tend to forget that what is important is the fact of planning, not the physical product, the plan. Planning is evidenced by consistent, anticipatory decision making, which means that, when you need to make a decision, when you have a crisis, you have a certain set of decisions already prepared for it. That is anticipatory. And, consistent means that you do not undo the benefits of one decision by making a contradictory decision with the next crisis. So your decisions need to be consistent with each other and with what you are trying to achieve. If you do that, you are planning. If you are doing that, that is good. The opposite is not so much bad planning but an absence of planning, lurching from one crisis to another and doing firefighting too late.

A plan as a physical document is nearly always a political tool. It is to reassure people or it is to get money approved. It is a tool. The plan and the planning are different things and should not be confused. A physical plan, a document, is no substitute for managing in a planning way and if you are managing in a planning way, you do not need a paper product, unless there is a political need for one. We were doing planning pretty well. The catch was that the State had forgotten that the old plan, the ten-year

plan had expired, and the University was being hosed with money because the State honored the formulae in the plan. So a really foolish thing would be to say, hey, you know these formulae that caused you to send us so much money, well, actually, the justification for them expired last year. [Laugh] Because funding would immediately go to zero and you would be back to square one. So the new plan was suppressed.

It seemed to me a waste, so the upshot was that, with agreement, I took the text and systematically removed mention of the University of California from it and distilled it. After I had got it to my satisfaction, I spent most of a whole summer rewriting it sentence by sentence and polishing it. It got shorter and shorter and clearer. I like the slogan “concise, precise, and incisive.” That was what was published as my booklet *Redesigning Library Services: A Manifesto*, published by the American Library Association in 1992.²² Michael Gorman had arranged with the American Library Association to initiate a series of books for the libraries of the new millennium or some such title, and this was the first and only one in that series. It sold rather well. ALA seemed to think it was about computing and it was promptly put out of print because computer books are quickly obsolescent, which was a pity because it was not about computing. It was a lot about the distinction between means and ends, between process and purpose, and how the rise of the new technology did not mean any change in libraries’ purpose, but a whole lot in terms of process. It was a sort of essay, a reflective essay, on what it means for library service now that there are choices of technology. That is how I saw it.

I felt a need based on my involvement with library committees. What guided my writing and revision was this: Frequently universities decide they should consider having a new library building or remodel or they need a new university librarian and they appoint a committee, most of whom are not professional librarians. What would be the most useful document to place in the hands of committee members as they launch into discussing whether they should have a new building, discussing what to do about replacing the university librarian, or a strategic plan for the library? Assuming that they are not professional librarians, what would be the most useful single thing to give them to read? That was what the book was intended to be. It is about eighty pages, small pages. It was a direct result of my work as Assistant Vice President for Library Plans and Policies.

Working in it reinforced an interest I had had all along, in technical writing. At Lancaster I was quite proud of the technical reports that came out. By the time they had satisfied Graham Mackenzie and Ian Woodburn or, more especially, Tony Hindle, and myself, they had been stroked and polished so the writing standard was pretty good. I like writing and I think that technical writing is an underestimated skill. I was acquiring a taste for popular writing. This manifesto was an exercise in it. That is also one reason why the Goldberg biography²³ contains so much explanation of background and contents. It was not written for specialists. It was written for the educated general reader.

I had leave on full pay through December 1987, then I went back to the campus and immediately did what professors do best, namely go off on sabbatical. I had accrued sabbatical leave at an accelerated rate as Dean and as Assistant Vice President. I went to Australia and Austria for the academic year 1988-89 to continue work started on research leave in Klagenfurt in 1980.

RESEARCH LEAVE IN KLAGENFURT, AUSTRIA, IN 1980

In 1980, when I had been Dean for four years and was exhausted, I asked for research leave. It was really a sabbatical but was called research leave. We went back to where my wife grew up in Austria,

²² M. Buckland. *Redesigning Library Services: A Manifesto*. Chicago: American Library Association, 1992. Also <https://archive.org/details/redesigninglibra00buck> Also published in Croatian, Hungarian, Japanese and Korean editions.

²³ M. Buckland. *Emanuel Goldberg and his Knowledge Machine: Information, Invention, and Political Forces*. Westport, CT: Libraries Unlimited, 2006.

or to the nearest university, about forty miles away, in a town called Klagenfurt. The scenery is beautiful. It is about fifteen miles from the Slovene border, with lakes and alps. The little university was just about ten years old and specialized in training teachers. We were there for about four or five months. There were huge problems for the children, whom we put in the local school and they were very badly treated. I would not do it again. We did not realize until it was too late. But for me it was wonderful. Here I was in a situation with basically nobody to talk to. I was the guest of a Dutchman who had gone there as a professor. There was a library of sorts, but with very little relevant to what I was interested in and nearly all in German, which was too difficult for me. I was reduced to thinking and writing! I took with me data from the last of the projects at Lancaster, which had never been properly analyzed. It had to do with making the library adaptive to changes in demand, specifically through adaptive loan periods and duplication policies so that whatever the increase or shift in the demand for documents, the library would respond. What we discovered was that the demand for library services is hugely sensitive to what is provided. People adapt. So you have a doubly homeostatic system. By making the library stock policy (loan periods and the purchase of duplicates) responsive to the pattern of demand, the library had become much more adaptive. But what people had not appreciated is that the *demand* for library service is also adaptive. If you get disgusted and you cannot find anything, you do not go there anymore. If it is a quiet, comfortable place and you can always find what you want, you go more often. It is what economists call elasticity of demand and this is what I addressed in my dissertation. So, therefore, what you need to do is not only build models of how the library might respond, but you also need to build models of how the users might respond. We got money from the Council on Library Resources to model the elasticity of demand and user behavior. We collected some very interesting data. We got a stratified sample of users and we paid them a small amount of money. We gave them psychological tests you would not be allowed to give now and we would send them, at intervals, a two-part questionnaire. Then the next time they went to the library they had to fill out part one. As they entered the library they had to jot down what they intended to do. In part two they had to keep a diary of what they actually did. One of the things we learned was that what they did was what they intended to do, in detail, which had not been obvious. The other thing we learned was that it was too complex to be reduced to a model: The factors involved, the decisions, and what have you. Geoffrey Ford, who took over from me at Lancaster, did some qualitative analysis. He came up with three categories: workers, lurkers, and shirkers, and variations. But it had not really been analyzed any further, so I got a copy of the completed questionnaires and I took them to Klagenfurt intending to try to analyze them. By that time the research program at Lancaster had fizzled out. That was what I intended to do. But before I worked on that, I gave priority to another topic.

As Dean I had been irritated, bothered, by two things. One is that the individual faculty members of the school were not as interested in what each other did as I thought they ought to be. And second, implementing the Wheeler Report, we had by this time made a major strategic investment in diversifying the range of interests at the school, into records management, archives, and other things. Now, we did this because there was a campus committee report mandating us to do it and we did it because it felt right. It was the right thing to do and it made sense in terms of evolving the field. The phrase we used, at least I used, was jocular: The marking and parking of documents and data for folks to use in whatsoever context. That was the scope of the school. Those words. People would smile, but that really was what we were doing. That is different from saying we are going to educate librarians. It was broader and it seemed to be working. But, it was not the case that we had worked through a conceptual rationale. We had the jocular slogan, we were making changes, but it needed thinking through.

[Interruption]

RW – Well you were back as a real, regular type faculty in Spring 1988.

MB – Yes, doing what faculty members do best, going on sabbatical in 1988-89.

I was talking about my first sabbatical in spring 1980 in southern Austria, a beautiful area. The family had all kinds of problems. We were cheated by the landlady, we were diddled by the car salesman we bought our car from, the school district acted irresponsibly to the children, and we were harassed by the local police. But for me it was wonderful.

RW – Your kids were how old at this point?

MB – My daughter would have been nearly fifteen and my son was eleven. Anyway, for me it was wonderful. I had taken this material from Lancaster intending to try again to do an analysis of the material, but before that I was reacting to two problems at the school. One was that the fact that the faculty were not as interested in each other's work as I felt they ought to be and the other was that we had made this major strategic shift in the mission of the school, and while it felt right and we had been told to do it and it seemed to be working, it was not the case that it had been really thought through conceptually. It had not been theorized much and it seemed to me that it ought to be. So I decided to think about that, get that out of my brain, before turning to analyzing the Lancaster data. I did it by starting to write little essays, writing and thinking. I started writing these little essays to myself on these two different topics and then I decided these two different topics were the same topic. It was how everything is related to everything else within the scope of the school and why an individual faculty member ought to be interested in what the colleagues were doing. Unless you can tie the pieces together then you could not have a coherent account of what the school was about. First I decided that these two different problems were the same issue. Then I decided that this was more important and more interesting and bothering me more than analysis of the Lancaster data. So I decided that, like Einstein, I would do the special theory before the general theory. I would try to work out, as a test case, library services before addressing the broader family of information services that involved collections: archives, records management, museums, and databases. If I could work it out as a test probe on libraries, how everything was related to each other and how it fits into its contexts. If I could crack that, then I could try to generalize. I saw it in biological terms. You have species within genera and comparative anatomy was the way I thought of it.

I simply wrote it out of the top of my head. I just wrote and finished the text, pretty much, in the four or five months I had. Then when I got back, I spent time in the library, adding the citations and references that made it look respectable. People do not fully appreciate that that is often how books are written. Doctoral students tend not to know this, but very often it is not the case that you go to the literature, make a synthesis, and then write a text. In this case, it was drawn from everything I had known and learned, as a librarian at Lancaster, as a researcher at Lancaster, as a library administrator at Purdue, as a dean at Berkeley for four years. Everything I had known and absorbed went into this and then I came back and made it respectable by decorating, garnishing, it with references and citations. Very often it was something I knew and remembered, but I just had not got the citation at my fingertips. It that was published as *Library Services in Theory and Context* in 1983 and it went to a second, expanded edition in 1988.²⁴ It that was always intended to be the special case which could later be generalized. I had to wait for my next sabbatical to do the more general one and after I had parted ways with the Office of the President I immediately set about getting a sabbatical in 1988-89.

AROUND THE WORLD, 1988-89

I was quite happy to go back to Austria again, but I got an email from Boyd Rayward, who had left Chicago and gone back to his homeland, New South Wales. He had become the head of the library and archives school at the University of New South Wales, which is in Kensington, a suburb south of downtown Sydney. He said that Australia was not quite as good on Alps as Austria was but why didn't I go to Australia instead of Austria? And that was agreed upon. They do have a few Alps. He was having

²⁴ Michael K. Buckland, *Library Services in Theory and Context*. Oxford; New York: Pergamon Press, 1983, 2nd ed., 1988. Online at the Open Library <https://archive.org/details/libraryservicesi00buck> .

difficulties rejuvenating the school, which needed it. He had brought the highly intellectual approach of the University of Chicago to bear on, let us say, a context that was not that way. This had not been appreciated by the faculty as he tried to raise standards and make everything more rigorous. So there was a little bit of a stalemate. He arranged a visiting professor appointment for me with two obligations: I would do an evening seminar for graduate students, much like the ones I did in Berkeley; and I would engage in discussions on curriculum. A specific problem there was they had designed a monolithic curriculum and had difficulty making any changes to it, other than replacing it with another monolithic curriculum, which was too much to do. So I never really got involved in detailed curriculum design, but what I was able to be helpful in was trying to get the individual faculty to allow a little change here and there and the key to this was to show them that they were actually teaching more than they needed to. That with a few changes and making the students do more, they would have less of a burden. That helped and eventually changes were made, but they were after the six months I was there. Six months is important because if you linger in Australia for more than six months you are become liable for income tax, so the thing to do is stay there six months minus one day.

We rented an apartment overlooking Coogee Bay, which is like the famous Bondi beaches. I would wake up in the morning—I would usually wake up before my wife—and I would read and watch the sun come up over the Pacific Ocean. Then when she woke up she would brew the coffee while I would go around to the local bakery and get hot bread for breakfast, walking along the beach. That is easy to adjust to. I would write during the morning and in the afternoon we would often go for a walk. We bought a book of self-guided tours called *Sydney Footnotes*. Then in the evening, we would watch a movie on the television. I am ready to do it again! [Laugh]

What I was working on there was primarily a sequel, the broader coverage, of what I had done in *Library Services in Theory and Context*. The sticking point had been that I had wanted to include museums, but as of 1988, the concepts and terminology prevalent in information science were not ready for stuffed animals as documents, or museum objects. I felt they ought to, but they were not, and I did not quite know how to deal with that.

Now, while I had been both active in the School, where I retained an office, and at the Office of the President, which in those days was in a building known as University Hall across the road from the west end of the campus, I would walk to and fro between the two about half a mile. I would walk past a huge building, the Life Sciences Building, which, when built, was the largest academic building in North America. There was a little doorway there, with a sign next to it saying Museum of Vertebrate Zoology. I like little museums, but it was never open, the door or the museum. Then one day I noticed a little sign which said, we are going to have an open house. It was the first open house in seventy-five years, and it was on Saturday. I said, I will go. I was unable to persuade any of my family to go with me. I figured I might not be interested if I waited another seventy-five years, so I went on my own. They had skeletons of revolting looking things in dubious liquids in glass jars. They had skeletons. They had a display with pelts of animals I'd never even heard of. But what really caught my attention were beautiful cabinets, like you have for maps. And you open a drawer, there laid, in rows, were dead woodpeckers and dead sapsuckers, with little tags tied to their feet. I gazed at this and I had the unworthy thought, the campus is so short of space, they are using prime campus space for dead birds! I mean, really! It is true. At Berkeley space is more difficult to get than either staff or money. It seemed irrational to me, but Russell Ackoff, one of the pioneers of operations research, had visited Lancaster where a friend of his had founded the first British department of operational research, and I had met him. He made a remark that then stuck with me. He said that if something appears to be irrational, it is probably merely that you just do not understand what the rationale is. This thought has saved me many times from making mistakes. I remembered this and I thought to myself, having these dead birds in trays feels irrational to me. If there were a rationale, what on earth could it be? I thought to myself, well, it probably has something to do with the University mission and possibly they are research material for researchers to work on to discover what was not known or was known but they did not know it was known. Or it could be instructional material so

that students could learn. Either way it has to do with learning and if you accept that proposition, as a librarian, it is clear: It is a dead bird lending library—or, rather, non-lending library. Functionally, in terms of the university's mission, it is no different from the books on the library shelves. It is just a different kind of document.

So there was a period of time when anybody who could not run away fast enough was subjected to a harangue on dead birds as documents. This was shortly before I went to Sydney in 1988 and when I got to Sydney there was only one person capable of stopping me. This was Boyd Rayward. I was in his office and was going on about dead birds as documents, specifically woodpeckers and sapsuckers, and he said, "Stop!" He reached behind him and he handed me a photocopy of a page in French. It was my idea, but it was a live antelope, and it was written forty years before. This was my first encounter with Suzanne Briet and her discussion of whether a live antelope could be made a document. Yet again my best idea had already been had by somebody else! But it impacted me and I continued to write. I was working on the text of what would eventually be published as *Information and Information Systems*.²⁵

The principal challenge in that book was this: As long as I was writing about library services, I could take the definition of document or information as a given. It is books and periodicals and a few other odds and ends. But if you are going to generalize to records management, archives, databases, or museums, you really have to address what you mean by information and that was a problem.

I found that Briet and I had an approach that would work, but it was not clear to me that anybody else had sorted this out and if it was new to me it might be new to other people, some other people, not everybody, but some other people too and that would justify an article on it. So I simultaneously incorporated it into the draft of the manuscript for the book and wrote it up as a separate article entitled "Information as Thing."²⁶ I think that the notion that if it was new to me, it is probably new to other people was justified by the attention that article got. The material in the article was diffused a bit within the book, but they were written simultaneously. When I got back to Berkeley I found that the library had a copy of Briet's booklet which is very scarce. I had heard of Paul Otlet but I only knew he was associated with International Federation for Documentation and the Universal Decimal Classification.

RW – You hadn't read Boyd's book?

MB – No, I had not read it.

RW – The book was ten or fifteen years prior...

MB – I knew Boyd was interested in Otlet, but that was all. I had not done anything historical since graduating with my bachelor's degree. Actually I nearly did. At the Sheffield library school, although it was only a nine month program, one third of the program was writing a little thesis on the topic of your choice. I really liked that. In my bachelor's degree I had specialized in the social and economic policies of the ministry of Sir Robert Peel, 1841 to 1846—in depth. I was very interested in that period. Now that is the period when the Mechanics' Institute libraries got going, more or less, in Britain and I knew, or discovered, that the Sheffield Public Library had emerged from one of these mechanics' institute libraries. So I decided I would do my mini-thesis on the origins and history of the Mechanics' library in Sheffield. That I was qualified to do. I went to the library and I got them to let me look at the minute book of the library, the chronicle of the meetings and so on, in lovely copper-plate writing.

I got it in my hands and I sat in this reading room and the sunlight was coming down in shafts. It rather dusty and you could see the rays of sunlight. I looked at this book and I suddenly said to myself, there is probably something more useful I could do. I gave the book back and I launched into a study into of how inter-library loan could be speeded up. [Laugh] I mean if there was a pivotal moment in my career it was that.

²⁵ Michael K. Buckland, *Information and Information Systems*. New York: Greenwood Press, 1991.

²⁶ Michael K. Buckland, "Information as thing." *Journal of the American Society for Information Science* 42(5), 1991, 351-360. Also <http://people.ischool.berkeley.edu/~buckland/thing.html>

I had pretty much finished writing the book by the time I got home from sabbatical in summer 1989.

After six months minus one day in Australia we went on to Austria. There are a lot of scenic routes from Australia to Austria. We went by way of Hong Kong, Singapore, Bangkok, and Bombay. We spent two weeks touring in India. If you want a contrast, go from Delhi to Frankfurt where we picked up a spiffy new VW Vanagon camper.

RW – You were driving? Taking ships and then driving?

MB – We flew. In India we put ourselves in the hands of a company that provides a driver and a car. We did car and plane and train in India, but everything was organized by the travel company. You have to do that. I had to do that. In Frankfurt we picked up this lovely VW camper, fitted out with everything, and drove south to spend Christmas with the in-laws in Austria.

I had a Fulbright research fellowship in Graz. Graz is where Schwarzenegger comes from. It is in the bottom right-hand corner of Austria. It used to be an important town, but with the Iron Curtain it was not on the way to anywhere and it sort of sagged. It was where Viennese bureaucrats retired because the weather is nice. At least, it is in the summer, less so in the winter. There I maintained a very low profile and wrote and wrote and wrote. We did seventeen thousand miles wandering around Europe in this Vanagon looking for castles and parks and quaint medieval towns.

RW – What year is this?

MB – It was '88-'89, the academic year. I knew enough math to know that if you leave at the beginning of the summer, take an academic year and then the summer following, you will get more than twelve months in. That was '88-'89. Basically, it was '88 in Australia and '89 in Europe.

RW – Now your kids are gone, finished high school and all that by this time?

MB – The kids are gone by then, although my son came out to join us briefly. My crippled mother came out from England to join us in Australia and then again in Austria. We just had a wonderful time driving around.

Fulbrights are administered by the State Department and the State Department has cultural attaches all over and they run libraries, American libraries, under various names, or used to, and it was generally the librarians who had money to arrange for Fulbright scholars to give lectures, public lectures. So I got invitations from all over Europe from the cultural attaches, from people who are mainly librarians who could not pass up an opportunity to invite a professor of librarianship to give talks. I accepted some invitations and not others. We went down into Yugoslavia as far as Sarajevo. We also went to Spain and took the opportunity to travel slowly in the Vanagon. Also West Germany, and then into East Germany, before the Wall came down. The Wall came down just after we left there. I am glad that I got to see Communist East Germany before it disappeared. There is another whole story associated with that. It was a very interesting experience. In Dresden, I stayed in an apartment near where Goldberg lived, although I did not know that at the time, of course.

THE HISTORY OF DOCUMENTATION

After I got back, I decided to read everything I could find about Briet. I wrote a little article about her for the *Journal of ASIS*²⁷ and that was picked up by the French, who had equally pretty much forgotten her. So that article in *Journal* was republished in French²⁸ and since then I have written a number of things, including an encyclopedia article, about her. This inspired a young academic at the Sorbonne to write her habilitation thesis, which is what you write to qualify for a tenured professorial

²⁷ Michael K. Buckland, "The centenary of 'Madame Documentation': Suzanne Briet 1894-1989." *Journal of the American Society for Information Science*, 46, no 3 (1995): 235-237 (1995).

²⁸ Michael K. Buckland, "Le centenaire de 'Madame Documentation': Suzanne Briet, 1894-1989." *Documentaliste: Sciences de l'information*, 32, no 3 (1995): 179-181.

appointment, on Briet and her context. This was reflected in the presentation at the ASIST Annual Meeting the year before last on the young women who transformed French librarianship between the world wars.²⁹ That, in a roundabout way, was triggered by Boyd handing me the Briet photocopy.

Then I started to read Otlet. I managed to borrow a copy of his *Traité de documentation*. Eventually I got my own copy. I got an email from somebody who said, I have got a copy of Otlet's *Traité*, do you want it? The email was from Israel and the price quoted was \$800. I thought about it. I am a cheapskate and I did not really want to pay that much, but I decided that I would. But before I replied I got another email saying that he meant \$80. Because of all the French vocabulary I had learned in high school I had no difficulty—not much difficulty—in reading Otlet and Briet and their context. The more I did this, the more I felt like an archeologist who had discovered the traces of a lost civilization in the jungle. Nobody else knew about this, as far as I could see, except for Boyd, hardly anybody.

I got more and more irritated with the mindless invocations of Vannevar Bush as the father of information science because I knew that could not be right. There had to be more of a story. Linda Smith at Champaign-Urbana wrote two papers on the citing of Vannevar Bush as a cultural gesture, documenting that this almost mandatory ritual of citing Bush and his article, “As we may think”, was often done when it was irrelevant or you could plainly see that the author had not read it, or it was just an attempt to make the article respectable. It really annoyed me. One day when I had read one too many of these silly citations of Bush, I said, I am going to find the rest of the story. I, a librarian, will find the rest of the story. I went over to the library to find the rest of the story, not knowing where to begin.

The only lead I could think of was that I had a vague recollection that Robert Fairthorne, whom I knew and greatly respected, had written something critical of Bush. I was not sure what it was or what it said, but he was almost the only person who had done that. I found it in the first issue of a British journal called *Computing Journal* where there is a lovely article that is reprinted in his book of essays called *Towards Information Retrieval*.³⁰ He says, well, there is Vannevar Bush (whom he likens elsewhere to a Yankee in the court of King Arthur) and there are a few problems with his essay, “As We May Think.” He forgets his own assumptions, he does not really know what he is talking about, he has got it all wrong, and his ideas are not new. That is not what people normally say about Bush. Fairthorne's beautifully written essay concludes that we should be grateful for Bush because this article opened people's eyes and purses for information retrieval.

Fairthorne mentions the imagined Memex and how this is a fantasy was based on an actual machine that Bush tried to build with his graduate students, the microfilm Rapid Selector. It turned out that I knew by chance one of the graduate students who had worked on it. Anyway, Fairthorne wrote, “Bush's paper was timely even though few of his suggestions were original. The Rapid Selector itself had probably been realized as a workable device by E. Goldberg of the Zeiss Company around 1930.” 1930! That was years earlier than Bush. So who was this guy and what had he done? And who knew about it? I spent more than fifteen years doing detective work on who was this guy, and what did he do, and who knew about it, and how come he had been forgotten.

RW – I remember in '96 when we were holding those meetings preparatory to the first Chemical Heritage Foundation Conference, that you were just then in the process of digging out stuff from here and there, and how excited you were by it.

MB – Yes. I identified who he was as follows.

There was no E. Goldberg in the online catalog for the University of California, but at that time there were still some cards that had not yet been keyed and they were accessible. I looked there, because I

²⁹ Sylvie Fayet-Scribe. “Women professionals in France during the 1930s.” *Libraries and the Cultural Record* 44, no 2 (2009): 201-219. Translation and note by M. Buckland.

³⁰ Robert A. Fairthorne. Automatic retrieval of recorded information. *Computer Journal* 1 (1958): 36-51. Reprinted in Robert A. Fairthorne, *Towards Information Retrieval*. London: Butterworths, 1961, 135-146.

could not find anything anywhere else and there was a card for a German doctoral dissertation from Leipzig of 1906 on the kinetics of photochemical reactions by an E. Goldberg. When you look for them, E. Goldbergs are not that frequent and here was one in the right country. Leipzig is not far from Dresden. They are both in Saxony. German doctoral students were expected to have their dissertations printed at their own expense and copies were sent to the leading research libraries of the world. Large research libraries have basements full of crates of often un-catalogued German doctoral dissertations and what is worth knowing if you are a researcher is that the last page is usually the student's resume.

I asked the Northern Regional Library Facility to send me this 1906 dissertation and it turned out that the author was called Emanuel Goldberg and the resume begins, "I, Emanuel Goldberg, of the confession of Moses, was born in Moscow, son of an army doctor . . ." and then what he had done up to 1906. He had decided as a kid that engineering was the thing. He wanted to be an engineer and he was determined to go to the Imperial Institute of Technology in Moscow. He had to take the entrance exam and he got top marks, except that another student got equal top marks. But there was a quota on the admission of Jews of three percent, which meant one student. Both of the students getting top marks were Jewish. A coin was flipped to choose who should be admitted and he did not get it. He consoled himself by signing up for Chemistry at the University of Moscow and was bitter about that for the rest of his life. It caused him to leave Russia to avoid anti-Semitism. He went to Germany, which was not the best place to go to avoid anti-Semitism. He could have come to the United States and encountered anti-Semitism. It would have been less virulent.

At Sheffield, which was an engineering school, the reference collection was weak. So, in the course on reference work taught by Sam Stych, who had gone there from the Birmingham Public Library reference library, which is one of the great reference libraries of Europe, was a series of lectures in the form: There is this reference work called so-and-so, and it is good for the following purposes. In this case, our library does not have it. That was what the reference course was composed of. And one of those items was *IBZ*, also known as *Dietrich*, from its compiler, the *International Bibliography of Periodical Literature*. I do not know why I remembered *IBZ*. I had never seen it and I had never needed to use it, but "*IBZ*, also known as *Dietrich*" had somehow stuck in my mind from this lecture in Sheffield in 1964 and so when it was a matter of tracking down somebody working on technical topics in Germany, I thought to myself, "*IBZ* also known as *Dietrich*"! It was time to go and look at it. I found it in the stacks and looked in 1906.

Then I looked at *IBZ* around 1930 and found another E. Goldberg writing about printing and photoengraving and reprographics. So then I went back to 1907 and 1908 and then 1929 and 1928 and was able to build a bibliographical bridge. Fortunately he was writing prolifically throughout that period and it became clear it was the same person. It also told me where to look for more. And where to look for more was old German technical journals and old textbooks on photographic technology.

RW – You fairly well documented this in the book ...

MB – That was the origin and genesis of the biography of Goldberg.³¹ It became a huge adventure. I got enormous pleasure out of that and it drew on almost everything I had ever learned. I had to learn a little more about chemistry, but as a teenager I had been interested in camera design, not taking photos or processing film, but actually the cameras. I could have told you the price of any second hand camera back then and more or less I knew how they worked. And, since I had fallen in love with an Austrian, I had become more interested in central Europe. One of the reasons that I made progress with her was because I was the only person she met in England who had heard of Carinthia, where she came from, which I had encountered in my history studies. Who says history can't be useful? [Laugh]

³¹ Michael Buckland. *Emanuel Goldberg and his Knowledge Machine: Information, Invention, and Political Forces*. Westport, CT: Libraries Unlimited, 2006.

BACK TO BERKELEY

RW – Okay, so, Berkeley. Finish up with Berkeley. What about the School that you'd like to talk about?

MB – I gave up being Dean in 1984 after having been Dean and Assistant Vice President, in parallel, for a year. If I had known then what was going to happen, I would not have given up the Deanship. The campus authority was the Chancellor. The Chancellor's Office failed to appoint a regular, full-time Dean for fourteen years. We had a series of acting Deans and then we had a sort of regular Dean half-time and there was some uncertainty as to whether that was a permanent appointment or a temporary one. And we were not allowed to hire any faculty because we had not got a regular Dean. The argument was that the new Dean, whoever it would be, she or he should take on the hiring of new faculty. So we were withering on the vine. Then, the campus had a huge economic crunch. They decided that they would eliminate eighteen percent of tenure-track positions. This was the worst crunch ever, worse than the Great Depression.

RW – What year was this?

MB – It was about 1990, '91, '92. Now, what happened to the School after then is still a sensitive area. Some things I do not want to talk about and other things I do not know about. At Berkeley there is, at intervals, a Graduate Council review of each graduate program. The Graduate Division is the administrative body, and the Graduate Council is an Academic Senate committee. The Academic Senate committees are very powerful at Berkeley, more than anywhere else. Anyway, there is a review by the Graduate Division and the Graduate Council of each graduate program. Officially I think it is meant to be every seven years, but they do not come close to maintaining that schedule.

These reviews can be extremely influential, for good or for bad. It was one of these reviews, nicknamed the Wheeler Report, that led to the recommendation that the School change its direction, that was in 1974 and was my mandate when I came in. There was one that reported in about 1991. As I recall it was nicknamed the Oliver One report, from its chair. Like the Wheeler Report, it criticized the Chancellor's administration for neglecting the School and it made an appalling rhetorical point, at the end. What they wanted to do was to get the Chancellor's Office's attention. They wanted to chastise the Chancellor's Office to get its act together, but it came out in a sentence that said something like, 'if you can't get your act together and find a Dean, you might as well give up.' We knew they were going to say something like this and we begged them not to say it that way, but they did. And this was interpreted as a recommendation to close the School. But actually, if you read the report, it was a positive, encouraging report, but it had this unfortunate statement at the end and the Chancellor's Office started talking about closing the school. Never really for attribution, it was sort of dark mutterings and once the blood is in the water, the sharks come out. It is extremely difficult to recover when something like that is said, even in the best of times. The size of the Berkeley campus is capped. A program can only expand at the expense of another program. It is a zero-sum game. Most universities are not this way, but Berkeley is in the best of times. So you can imagine how enthusiastically the sharks came out in the middle of a huge financial crunch. Well, briefly, another committee was formed. This was called Oliver Two, as I recall. And it essentially said the same things. It said, the campus really needs a good presence in this area, the school has its problems, it needs funding and attention, so it should get on with it. But again, this was interpreted as a recommendation to close. It sounds odd put that way, but once people have an expectation, they can easily find it. And, then there was a third committee. Now, the committee reports were actually positive and encouraging. These committee reports tended to be. But they were always sort of interpreted as recommendations for closure.

It was speculated that the Chancellor's Office thought that a school that generated graduates for the public sector might be easier to dispose of than one that had alumni in the private sector. If true, it was a gross miscalculation. Unprecedented support came out, skillfully orchestrated by the School's alumni association. It included recommendations from county boards of supervisors and a leaked threat for an egregious departure from protocol: that the California Congressional delegation had an opinion on this

and they did not approve. I don't know, but that was said. The Chancellor's Office had to hire one of our students to cope with the faxes coming in.

In parallel with this and unrelated, suddenly the school started getting research grants, including ones that I got. The school responded a little slower than it should have. We compiled a dossier of all of the positive claims you could make about the school. One of them was a graph showing the increase in extramural funding which was just going up off the charts. Because we had lost a lot of faculty and we had a lot of extramural grants coming in, we could show that we had almost the highest per capita extramural grant income of almost any department on campus. A little ingenuity and good presentation made an impressive dossier. During this time, Nancy Van House was Acting Dean. She was a relatively junior member of the faculty and this put her in a very difficult position, but she handled it well.

In the end, the alumni were very angry about this, as they should be. This was getting newspaper coverage, and one of the local newspapers juxtaposed two articles. One was a visit by Vice President Gore and Bill Clinton to ostentatiously pull telephone wires in a local school to inaugurate the information age, and the other was an editorial comment that shutting down the one school on the Berkeley campus that embraced the information age seemed foolish.

There was a momentous meeting at the Chancellor's Office and a lot of us went and stood outside, with slogans saying "Don't ignore the information age" and things like that. The outcome was that a blue-ribbon committee would decide what should be done. The blue-ribbon committee was explicitly told to disregard what existed and to design what *should* be done for Berkeley to be the international leader in the information age.

Almost immediately we began to know who was on the committee. Peter Lyman, then the University Librarian of the University of Southern California, a very articulate advocate of the use of computers in libraries and digital scholarship, visited the campus. I knew him. He was a friend. I like to be taken to and from airports, so I offered to drive him to the airport when he left. He confided in me that he had been asked to serve on this blue-ribbon committee and I knew immediately that we were saved. Because you do not put somebody like that on a blue-ribbon committee if you only want a burial party, not somebody knowledgeable, expert, articulate, and independent of the university. Then we learned Clifford Lynch was to be on it. It was actually a wonderful committee for the purpose. With one exception they were really good people. So I believed, and I think my colleagues believed, that the tide had turned in our favor.

But it was not the end of the story, for two reasons. One was that people from the school were represented on the committee. I was on it, Nancy Van House was on it, and Charlotte Nolan, who was Associate Dean, and Annette Melville, a very bright doctoral student, who was also doing graduate study in public policy. Now, if you have been thinking about what an information-related school should be as long as I have, or the others had, you have a lot to say. But, the members from the school met privately and we decided that it would be best if we could bring ourselves to keep our mouths closed and let the rest of the committee come to the right conclusion. Because if we said what should be done and if they agreed, it would still look like we had influenced the committee. But if the committee could come up to the right conclusions without us telling them what they were, then it would have greater legitimacy. And that is what happened. It was called the Information Planning Group and that report was, and may still be, on the school's website.

It was a good report. It was not written the way I would have written it. It was written in a way that was much more suitable for the campus political environment and it can be read different ways, with different interpretations. But for me it was a resounding endorsement of all the things we had been trying to do, but had not been allowed to do. I had a small role in the wording that referred to the existing school. There was compromise wording, which said something about building on the foundations of the existing school

So in a sense it was a victory, but there was a heavy political price to be paid. Chancellors are not eager to be proved wrong and, to put it crassly, the price that was paid was a political fiction that the old

school had been abolished and a new one created. Now, if you look closely enough you find that the relevant documents are ambiguous on this and not everybody would agree with me, but I am confident that it was de facto total continuity and also de jure continuity.

The action item that went to the Regents was a self-contradictory, confusing document of an extraordinarily bad kind. But among the factors that suggest that it was not a disestablishment and a new establishment was the fact that the school had a significant endowment and to disestablish the school would call into question the status of the endowment. Legally, under the doctrine of *cy pres* one is supposed to go back to the donors and ask them if it is okay to use the money for some other similar purpose. Administrators are not eager to do this. But if there was continuity they would not need to. When the “new” school name took effect, which was July 1, 1995, I guess, nothing changed except we printed new business cards and changed the name of the school on the stationery. The same people did the same thing. When the new Dean eventually came, he walked into a fully functioning school. I did not apply to be in the successor school. I did not need to. I was automatically already in it. The only thing that happened was that the personnel records were changed to reflect the change in the name of the school. This was a point we were rather sensitive about.

They did a search. They did not do it very well. In what I considered a brazen action, they recruited for a “Founding Dean” and they appointed somebody who believed it was a new school, that he was in fact the founding dean, that he would have a clean slate, and he had no obligation of any kind to the faculty in the “old” school. This raised policy questions that the Academic Senate took up because it went to the heart of the nature of tenure. There was a test case. Eventually the Chancellor’s Office negotiated an out-of-court settlement to avoid either the Academic Senate Committee on Privilege and Tenure making a decision or it proceeding as a lawsuit. So, the legal aspect was not resolved, but the Academic Senate made sure that University policy for dealing with these situations was rewritten much more clearly to protect faculty and I had a hand in the wording of that.

It was a nightmarish experience. It was a pleasure to turn my attention to Emanuel Goldberg and other things. Eventually, the Dean went off on sabbatical and he was temporarily replaced by a professor of electrical engineering, David Messerschmitt, a good and caring person. Eventually, a year or two later, the Dean resigned as Dean and was replaced by the present Dean, AnnaLee Saxenian, who has done a good job of rebuilding a sense of community, without which I felt strategic planning was pointless. People were now talking to each other.

The 1990s were an extraordinarily unpleasant, nightmarish period and Dean Saxenian has done a great deal to heal the wounds. Time has helped and some departures have helped. Now, with new faculty, I feel the school is in a much better position. One day in December of 2003 I woke up and calculated that I had worked full time for forty years and decided that that was enough. Two weeks later I was formally retired. The campus administration was enthusiastic about having my retirement as soon as possible. I did not take it personally because it is an accounting issue. As long as I was a professor, I was a charge on the campus’ budget. When I was retired I was a charge on the Regents’ pension system. If you take a systems view, it is a net gain for them, a net loss for me, but from a campus accounting view it is entirely positive. In order to do this, I agreed to volunteer my time to teach the courses for which I had been scheduled, so I phased out gradually.

I felt that the school was in good hands and was returning to a better situation. I had been actively engaged in the troubles and it was now a better time to go than it had been before.

RW – Now, in the interim of all of this, the doctoral students kept coming. For a while...

MB – The villainous Chancellor’s Office suspended admissions in the spring of ’93, just when we had gone through the admissions cycle and were about to notify the students. It was really too late for them to go elsewhere. It was an extraordinarily tacky move. They were anticipating a decision that in fact did not happen, namely the closure of the school. It was too late, as far as the applicants were concerned, and it cheated the state out of another cycle of well-trained professionals. What nobody knew—I don’t believe anybody knew—was that in the fine print of ALA accreditation, there is a clause which says if you

suspend admissions you have lost your accreditation. Nobody had any idea of that. We did not find that out until later.

No students were admitted for three years. This was a wonderful time for the existing doctoral students. They had all the attention they wanted from the faculty. By that time, all the faculty were tenured. We were way below the normal complement, but we had lots of time. We filled the time partly by teaching courses for other departments, including the one I did on cultural heritage. Then we resumed admissions and the problem with the accreditation had been discovered. It was discussed by the faculty very soberly and carefully. Not everybody wanted accreditation back. Some felt that was what we were trying to get away from or they had a bad attitude. But the consensus was that for at least a minority of our students, it is advantageous to be able to say their degree was accredited and for the others it did not matter. The Dean wrote to the ALA Committee on Accreditation stating that it was only a name change and we would like our accreditation reaffirmed, please. This was not the statement he typically made, but he did then, and got a rather irritating reply, saying, no way, you have lost your accreditation, go to the back of the queue, the first step is to get your chief administrative officer to write us a letter begging to start the process, and budget for a site visit, and so on.

The word was put out that the Chancellor's Office was not into accreditation anymore. They did not like it. I did not believe that. I thought that was a cover up. So the process to initiate accreditation did not happen. There were a lot of other things to do. It was not a priority. There was not unanimity on it. And the Masters students were getting very highly paid jobs. They were already averaging about \$70,000 a year beginning salary. So arguably the need was not great, but then a couple of things happened. One is that when students interested in library work expressed interest in applying they had to be advised that they should in their own interest go to an accredited program. So, increasingly, the incoming students were not interested in library work. Another thing that happened was that with the turnover of faculty, the composition of the faculty was progressively less good a match for an accredited program. When I retired, most of the sum of the faculty's professional library experience went with me in terms of years of service. The faculty who had come up in the library field were not necessarily particularly interested in it. People's interests evolve. So now the school would not be in a strong position to get accreditation back in terms of the composition of the faculty. The resolution was agreed that it would be postponed for five years, but when that time came, nobody revived it. This went down very badly with the alumni and with the library profession in California, and it was all widely misunderstood as a vicious attack on librarianship. It was widely believed that accreditation was deliberately lost but it was much more complex than that.

RW – The rumor reaching here, anyway, was you all gave it up out of sheer disregard for training librarians.

MB – I know. And there were some unfortunate public relations from both the school and the Chancellor's Office. But it was not that way.

Now, all through this, there was the following consideration. If I was right, the Information Planning Group report was actually, in fact, in substance, a ringing endorsement of what we tried to do. But that the political spin was that the Chancellor, who had tried to close the school, was breaking new ground by inventing a new field and establishing a new school, so you could not say so. Because to say that what the Information Planning Group had recommended was what we had been trying to do would undermine the Chancellor's move to make the "new" School the top campus priority. As one of my colleagues vulgarly put it, you do not want to piss on a parade that is in your honor. We had to not say that, even if we believed it. Not everybody did believe it. I did. But you just had to keep quiet.

Another aspect is that I believe that if you are going to be concerned about information services that involve what people know, sooner or later you're going to head back on to the same track, because of the nature of what you are dealing with, which is part of what I was talking about last night at the Deans and Directors lecture.

RW – Did the doctoral students’ interest in libraries ever—during this time and before—was it high? And secondly, did it change?

MB – It fizzled out. The ones interested in library stuff remained so, but they have graduated and left. The last one really was Allan Konrad. Then Ryan Shaw became interested in digital humanities and library stuff, but he did not really come at it with an interest in library work.

RW – What about Ron Day?

MB – Ron Day was long before. He was a Master’s student. He already had a PhD in critical theory of literature and some kinds of philosophy. He was long gone.

Faculty recruitment was heavily into social sciences. The last person with an MLS or library background to be recruited was Ray Larson, who has been a full professor for some time now. And it proved very difficult for the students. Some, a few of our Master’s students, did get library jobs, but they ran into the illegal requirement that you must have an MLS. It is illegal to advertise for an MLS only and not say “or equivalent.”

RW – In California?

MB – Federally. Under Federal law. If you can justify a job requirement, you have to say “or equivalent” and people do not. Even if they do, they may not be willing to honor it in practice. A few went to work in library automation activities, sometimes without the title of librarian. A number of them went to work for the California Digital Library and did very well, but student interest has moved away into social computing and the role of cell phones and away from the organization of knowledge, more or less. We did an examination of the job titles of the graduates a couple of years after the School resumed and the job titles they had were a wild diversity, but they really did have to do with the organization of knowledge. I mean website designers and interfaces for search engines and so on. So in a sense, we had rather gracelessly ended up on the trajectory that had been initiated by the Wheeler Report, but the second half of that trajectory was a bit bumpy.

RW – Now are folks like Hal Varian getting doctoral students in the economics of information?

MB – Yes. He has been chief economist at Yahoo for some time. Yes, they did.

RW – So you had a variety of folks in the doctoral program interested in...

MB – Lots of doctoral students and they are very bright. Some of them have a sort of library interest. Ryan Shaw became my research assistant and he played a very significant role in extramurally-funded research on accessing reference works and helping editors who are doing scholarly editions and so forth. I was very blessed with my doctoral students.

SCHOOLS OF INFORMATION

RW – I had some questions about LIS education and IS education in general, and you’ve touched on it, but to ask a general question, currently in your view, are we headed in a good direction, generally across the field?

MB – Generally across the field, I believe that we are, but I worry a great deal that the I-schools don’t have a coherent account of what they are doing and why. I think that is dangerous. They have been riding the crest of a fashion for “information” and they have been doing it successfully, but I do not think that is enough. The tide will turn and information will become less fashionable. Something else will become fashionable and then if you do not have a compelling rationale for why your school is important, then you are in a very vulnerable situation when the economic climate turns cold.

RW – So what is missing generally in the I-school movement and the I-school education movement?

MB – I think that what is missing is a coherent account of the nature of the schools, of the nature of the field, and the rationale, the justification for their existence beyond a sort of hand-waving level—“Look how many terabytes there are!”—and slogans.

RW – Are they any different from a Library and Information Science program?

MB – I think the library schools, when they were library schools, had a much clearer sense of their mission because they could identify with libraries and people knew what libraries were. People could understand that libraries were socially useful and that they needed skilled professionals. There is something identifiable and recognizable about a library and a library service and librarians are something the outside world can relate to. Libraries are very popular institutions in spite of all the talk about budget cuts. Library schools are very much better off than schools of journalism. I would not want to trade places with a school of journalism.

RW – Particularly when our newspaper here has gone from twenty-five pages in the front section down to four. And almost all of those stories come from ...

MB – We had the then-Dean of the Graduate School of Journalism on campus come and talk to the Information Planning Group and the picture he painted of his field was appalling. It was scary, but that is a whole other topic.

RW – Yeah. Well, and then we're joined at the navel with one hair. [Laugh] It is not a whole different topic.

MB – I know. I believe the potential is there and I have opinions and prejudices on what mass communications ought to become and how it could become, but that is a little different from journalism. But I won't go into that territory here.

RW – And I have a daughter that does journalism, so it is not an un-academic subject. Anyway ...

MB – There were people who in 1976 wanted the School's name to be Information Science, but the prevailing opinion was that that was not a good thing to do because (a) it was not that scientific, and (b) we had people seriously into the history of publishing and the history of the book, and we knew that we might become interested in archives, so "Information Studies" seemed better.

RW – And you were doing records management stuff, also ...

MB – Well, we did, but not at that time. I'm talking January '76 or February. As a colleague later pointed out, we should have put the words in alphabetical order. It should have been "School of Information and Library Studies" which some other schools have done. The reason for this is that School of Library and Information Studies is simply too long for anybody to remember. I would encounter people on campus and they'd say, "Hi, Mike! What are you doing? You're in the School of Library..." and they would be lost. It sounded more retro than what we had been, "School of Librarianship". If we had changed it to "Information and Library Studies" they might have said, "Oh you are in the School of Information..." To a significant extent, what we had done had not been noticed on campus.

THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY

[Note: In 2000 the American Society for Information Science (ASIS) became the American Society for Information Science and Technology (ASIS&T) and changed to the Association for Information Science and Technology in 2013.]

RW – Let us talk about ASIS&T. In 1998, you were elected President of ASIS. I remember asking you, prior to your taking office, what you were going to do, and you said, "I don't know. Somebody will tell me what to do." Well, I assume somebody came along and . . . What did you do? Just kind of run through the ASIS&T...

MB – The first half of that statement was true. [Laugh] I did not know what I was going to do. When I was at Lancaster, I spent a lot of my time reading the literature. I used to go through, page by page, the National Science Foundation's *Nonconventional Technical Information Systems in Current Use* reports.

RW – I've got a whole set of them up there.

MB – I had the luxury of being able to do that. I was much more current with the literature then than ever since. So I knew quite a bit about the U.S. scene. I knew the names of the luminaries associated with

ASIS&T though I had never seen or met any of them. We invited Ferd Leimkuhler to Lancaster but he was not really much involved with ASIS.

In 1969, my brother invited my wife and me to visit him in Vancouver and we took a detour via San Francisco and Berkeley. We stayed with the Leimkuhlers a couple of nights and I was invited to give a talk at the library school. I do not remember how it all worked out, but, still jetlagged, I was told that I was the speaker of the ASIS local chapter meeting. I do not remember where it was. I think it was in Oakland, and I sat next to a guy called Charlie Bourne and there was another guy called Hal Borko there. I gave a talk. There was a grand piano. And that is about all I remember of it. That was my first actual encounter with ASIS.

I moved to the United States in March of 1972 and so naturally I went to the ASIS Annual Meeting in the Fall of '72. That was the first time I attended. It was a natural choice for me, given my interests, to go to ASIS and I have been attending the Annual Meeting ever since. I have not attended all years, but I've attended a lot of Annual Meetings.

RW – And that was immediately following the almost-merger with SLA [Special Libraries Association].

MB – Well, I did not know about that.

RW – You did not. I guess by that time the fallout had gone.

MB – The comparable body in the UK was ASLIB, and they had a personal membership but I did not join. I had no money then. In the British system if you wanted to be a librarian the trade ticket was to be and stay a Chartered Librarian. But to be a Chartered Librarian, you had to be a member of the British Library Association and pay membership. You had to have an acceptable qualification. The British Library Association had administered qualifying courses and only a minority went to higher education, library school, then. You needed an acceptable qualification and you needed to have done an apprenticeship of, I don't know, eighteen months or so in a real library. Then you paid your fees and you got a certificate saying that you were a Chartered Librarian. If you lapsed your membership you were supposed to give the certificate back and stop making that claim. So I joined the Library Association. What else? And I became a chartered librarian because the Sheffield school was in effect accredited. Not formally, but in effect. The only other option in the UK was the Institute for Information Scientists, and these people were seriously confused about the difference between the science information and information science.

[A small part of the recording was lost at this point.]

MB – Don't tell me my priceless words are lost.

RW – So I missed it. We can't get the other tape recorder working. It is full. So we will go on with this tape.

We were at your beginnings in ASIS. 1972, you said.

MB – The first ASIS conference I attended was 1972 and I have attended most since then. I have tended to avoid volunteering for activities in professional associations. I have been busy. I spent a lot of my adult life tired. Working hard and tired.

RW – Writing grant proposals.

MB – And writing grant proposals. Writing grant proposals all along, actually. I've been involved with extramural grants since 1967 pretty much non-stop. So I have tended not to volunteer, but I get invited to do things sometimes. I have done a little committee work with the California Library Association. Almost none with the American Library Association, although I am a life member. I bought a life membership when it was an affordable investment. With ASIS&T, I have been much more involved. I have done a lot of refereeing of manuscripts for *JASIS&T* over the years.

I have had a number of articles published in *Journal* of ASIS&T of course and I have written a little in the *Bulletin* of ASIS&T, not much. Mostly, apart from that, I have been on conference technical program committees. I was largely responsible for planning a mid-year meeting that was held in 1991 in

San Jose. It was not a financial success, but it was a good meeting. Aside from the involvement in the Special Interest Group on the History and Foundations of Information Science—and that is a topic in its own right—I have not volunteered, but I have occasionally been co-opted.

I got a fax asking me to stand for President. I had not been on the Board of Directors and I assumed then and now that they had had other people lined up who had turned them down, but ASIS&T was always my primary association. It was the one I felt that matched my interests best ever since I got to the United States in terms of what I do and what I am interested in. So I agreed to run and got elected.

ASIS was at a difficult juncture. Membership had been slowly declining for a long time and the budget situation had been gradually deteriorating for a long time. These were long-term issues. The drop in membership, as far as we could tell, was generally true of professional associations. There are a lot of reasons why professional association memberships were declining generally. Employers were less willing to subsidize membership. Increasingly you had two-income-earning couples and they are busy. Increasingly there were pressures in the workplace to catch up with the latest software of the minute rather than broader, deeper issues and you had a rise of specialty associations in niches and you have got the imperialism of the Association for Computing Machinery (ACM). A lot of problems. I followed “Ralf” [Deborah] Shaw and Clifford Lynch was President immediately before her.

As Vice-President/President-Elect I was on the ASIS Board of Directors and I was impressed by the way that Clifford had initiated a good deal of house-cleaning, going back to first principles to clean out the attic. There were lots of relationships with other associations and nobody had any idea why or what they were worth. He did a big spring cleaning. Both Clifford and Ralf were engaged in this updating. I thoroughly subscribed to it and I pushed on it very hard. So when I came to be President, I made a change in the way that the quarterly Board of Directors meetings were done. I said that we really need to do some deep thinking about the purpose of this organization and what its mission is. We cannot afford to spend all our time on the administration of the day, so what we will do is, we will divide the agenda. We did a couple of things. We divided the agenda into the administrative issues that Dick Hill needed us to address and then, on the second day, we would not address any of those issues. As soon as we could dispose of those, then we would go into a quite different agenda, talking and discussing what kind of association it should be. The members of the Board of Directors liked this and it provided a motivation to get the administrative stuff out of the way quickly, because when that was done then we could move on. Otherwise the administrative agenda tends to expand into all the time available.

RW – Did you start this your President-elect year, or your President year?

MB – It must have been the President year, because I would not have been in charge of the agenda before then. But it was a reinforcement and a pushing on of an existing trend. I felt strongly. I was under some pressure to develop strategic plans and budget projections and business models, but, given my views on planning, I did not want to do that because I felt that doing that would distract attention away from the much more important issue of *planning*. You do a plan. A plan if it is not just a derivative from planning, distracts you from *doing* planning, the consistent anticipatory decision-making. I felt very strongly that we had to go back to first principles and start from there and I refused point blank to initiate a business plan or a strategic plan or anything like that, because I felt that that would interfere with the thinking and the *planning* that needed to be done. The Board of Directors bought that and that is what we did. We got through the administrative agenda at an amazing speed.

The other thing I introduced, which to my surprise they were unfamiliar with, is the distinction between a consent agenda and an action agenda used in local government in California. You divide the agenda into two categories. A *consent agenda* and an *action agenda*. The consent agenda includes everything which is not expected to be controversial and only requires formal ratification. No discussion. It is meant to be for items that do not need discussion. They just have to be approved. You just move a motion that the entire consent agenda be adopted without debate. That’s it, folks! That is half the agenda done. The protection is that anybody can ask for something to be removed from the consent agenda and moved to the active agenda if they want to discuss it, but that has an opportunity cost. The trouble is if

you do not do this, then people feel impelled to discuss everything whether that is necessary or not. So we did that. I was surprised that this was new for people. It saves an enormous amount of time. You have to be willing to move things off the consent agenda but it just saves a lot of time. We had excellent, thorough discussions and we formed little informal working groups in between meetings. The one thing we did not do was come up with anything that was visible to the membership. At one ASIS meeting I got a snippy comment that the Board of Directors does not seem to be doing anything in these parlous times. It would be too strong to say I lost my temper, but I was annoyed and made a strongly worded statement they did not know what was going on and that the Board of Directors was doing exactly what was needed. There was not much to show for it at the end, but I believed then and I believe now that nothing of strategic significance would happen unless the Board of Directors really thought through the issues and had internalized and accepted, cordially, whatever changes were needed. Unless that happened, nothing much was going to happen that was significant and developing and adopting a business plan was superficial in comparison. So that is what we did. The benefits of that would not show until later. I have not really followed what has happened. The economic situation has improved. How much of this is attributable to my contribution, I have no idea. You would have to ask Dick Hill or others. But I felt strongly that that was exactly what the organization needed at that time and I would have resisted spending the Directors time on anything else. There were endless possible reasons for declining membership but we did not know which were the real causes. The mid-year meeting had become unaffordable. They were good conferences but they were unaffordable and that had to change. And that did change around that time or soon after.

It was not a good time for me. I was very busy with other things and it was an exhausting year as most years were. I probably should not have taken it on the Presidency for those reasons, but on the whole I felt good about it. I ran tight meetings. There is an art to being a committee chair. There really is. If it is done well you don't notice. It is like a lot of things in life and in sport, if it is done well you don't notice.

SPECIAL INTEREST GROUP HISTORY AND FOUNDATIONS OF INFORMATION SCIENCE

MB – Now the SIG issue is a whole other matter. You know about that. I can put it on record if you want.

RW – I think we have documented it someplace, haven't we? Maybe not. Yeah, tell the first part of the story in terms of what you had been working on. You had just become chair of SIG FIS, Foundations of Information Science, right?

MB – Well, it starts before that. I took a dim view of the idea that theory in this field meant it had to be Shannon-Weaver Information Theory or something that looked like physics, but that had been a very influential view encouraged by Larry Heilprin and other talented people. I did not buy it at all and I think, truth to tell, the SIG FIS had declined.

RW – Fizzed out, yes.

MB – It had fizzled.

RW – Well the guy at Lehigh was the year before you and he had done nothing that year.

MB – It was worse than that, I think. I do not remember the details, but it was not an impressive SIG at that point. One of the problems that happen with SIGs is that the SIG committee says, "Golly gosh, we need a program for the next Annual Meeting." They pick a theme or they pick the official supposed theme of the next conference and they say to each other, can you work up something on this and can you work up something on that, and so on. That can work in most areas for which there are SIGs, but it cannot work in history and theory because, if the quality is to be good, you have to have people who have *already* done the work. You need people who have already done the work and who are willing to present it in an intelligible way.

I commented that ASIS&T, the complexion of ASIS&T, has changed. It is now dominated by academics and graduate students, but it was not that way before. The leaders were from think tanks, such as the Systems Development Corporation, people like Carlos Cuadra and Hal Borko. Don Swanson came

from a research corporation when he went to the University of Chicago. A lot of them were practitioners of various kinds from the information industry. Anyway...

RW – These were not research reports in other words...

MB – Well, a lot of it was research and development.

MB – I had not found what passed for foundations of Information Science to be very interesting, shall we say, and my experience with Briet and then Goldberg gave me this enthusiasm for rediscovering lost worlds. I decided that the ASIS SIG FIS, Foundations of Information Science, would be a good vehicle for inducing change. So volunteered to be the chair of SIG FIS in 1994 so that I could put it to good use. I also took it for granted that history and theory go together quite naturally and so whatever ASIS did ought to include the history of ideas relating to information science. Then I got interested in the history of documentation. So my first really important step was at the Annual Meeting in Washington in 1991 when I co-opted Irene Farkas-Conn and we put on the provocatively-titled session “Information Science before 1945”, a very carefully chosen title. Irene gave a talk about Watson Davis and the origins of ADI/ASIS and I gave a talk introducing Goldberg. Goldberg’s son, Herbert, came and talked about “what my Dad did” and there was hardly a dry eye in the house. The room was packed. It was really quite something. And we then took it from there. Boyd was somehow involved. Irene was actively involved in the earliest days. Trudi Bellardo Hahn got involved and you got involved. I do not remember the exact years.

RW – About the second year.

MB – I do remember your initiative to have a SIG for History. You got the requisite number of signatures, which was fifty, I think. You got a lot of people who were interested in history but they were not about to do any historical work.

RW – I don’t remember how many it was.

MB – Well, it was at or close to the requisite number and I felt, and you agreed, that we would have a more viable SIG if we joined forces and did both history and theory. So the SIG FIS was converted into SIG HFIS, History and Foundations of Information Science.

I was quite active for a few years in orchestrating the program which I did with a good deal of care. My rules were that I wanted people who had already done the work and had something to say and that we would have at least one session on theory and at least one session on history and as far as possible we would have papers that combined the two. I laid it on the line to the speakers that if you really want to talk about your research you do it in the bar because, for the public session, you have got to make it interesting to the membership because we have got to attract folks. There were two agendas. One is educating the membership and inspiring them, so you have got to be interesting, and the other is communing with other researchers, which may or may not be interesting to other people. This is show biz! That is the way I would put it. You have to make it interesting and intelligible, I would tell them, because if you care about the history and foundations of information science, then you have got to help the SIG to flourish. And this SIG can only flourish if it can compete with sessions on other things. So these were the criteria.

We managed to get some people from Europe involved and then we got into other things. There was your bibliography, there was your database of pioneers, then later there was the Pittsburg conference in 1998 and then the Philadelphia conference in 2002³², and then I felt that the world needed a chapter in the *Annual Review of Information Science and Technology* on History. There had been half a chapter way

³² *Proceedings of the 1998 Conference on the History and Heritage of Science Information Systems*. Bowden, M., T. B. Hahn & R. W. Williams. Medford, NJ: Information Today, 1999. *The History and Heritage of Scientific and Technical Information Systems. Proceedings of the 2002 Conference* [Philadelphia, Nov. 15-17, 2002]. W. B. Rayward, M. E. Bowden, eds. Medford, NJ: Information Today, 2004.

back, so, with help from a doctoral student, Ziming Liu, I wrote the first full chapter.³³ That was a lot of work, but I had been reading quite a bit on the history of the field by then and I had a diligent doctoral student to help me. A little piece of the interest in this at was that what I included and excluded was one way of trying to define the field. The structure and the classification that I adopted was taken from the *Information Science Abstracts* classification, the former *Documentation Abstracts*. That was one place I looked to find a categorization, although I am sure I mutilated it a lot.

I saw all of this as a campaign. It was an initiative to influence the field in terms of making it a more mature field by getting people to recognize there were ideas and there was a history. Historians ought to know that there is a history of ideas and they should not neglect that aspect. And people with ideas should know that there is probably history to any ideas they touch. So to me, it was a campaign and it could be written up as a case study in trying to influence a field and the ASIS SIG FIS seemed a really good vehicle for that.

RW – In another ten years we might finally wipe out Bush as the origin of information science. [Laugh]

MB – Some other myth will replace him.

The question would come up intermittently about a textbook on the history of Information Science. My view was that that was premature, that nobody could write a satisfactory history and that you did not really need to because in the short term we could put together a reader. There was the special issue of *Journal of ASIS&T*, which ended up as two physical issues and Boyd Rayward had already done a special issue of *Information Processing and Management*, which was one of the highlights of that journal's existence.

RW – Oh really? In terms of interest?

MB – It was. I was on the editorial board for some thirty years. It really was popular.

So, we got permission to reprint all of the articles in those two special issues. It had to be a photolithographic reprint so the articles could not be updated. So we offered to each author that they could have up to one page of anything they wanted to add or correct. Most of them did not, but some did. From a production point of view was really inexpensive. The doctoral student, Ziming Liu, and I did an update on the *ARIST* chapter and we got you to contribute good stuff. All that made the package an interim monument until such time as there was a textbook.

So, you put all that together and that adds up to a campaign.

RW – It is made a substantial literature. All those things put together, as well as keeping up with the other stuff.

MB – It did. It did. There was one year when the ASIS&T Annual Meeting Program Committee rejected our session and with the help of Dick Hill we did it anyway. That was when Miles Davis came.

RW – Yeah, that is right. The Sunday afternoon program.

MB – We did it on a Sunday afternoon in spite of it not being on the program. Unfortunately the attendance was not what one might desire, but it was good stuff. Eventually I got distracted into other things and I did less and less with the SIG. Other people took over but it finally needed rejuvenation so a series of old-timers came back to rejuvenate it. Professor Bob Williams and myself and Trudi Hahn and Julian Warner.

RESEARCH GRANTS

RW – We're about through with my list of things, but I do want to talk about your grant-writing experience. Jennifer and I have bemoaned the fact that we have so little support around here, in terms of

³³ M. K. Buckland & Z. Liu. History of Information Science. *Annual Review of Information Science and Technology* 30 (1995): 385-416.

getting grants out the door. I asked you yesterday, what kind of help do you have at Berkeley, and you said, none. I was shocked at that answer. How are you doing it? I looked at your bibliography, which I have not shown to Jennifer. You sent me this bibliography of grants won and lost, which goes on and on and on. How have you managed to do that? Say, between two and four a.m.?

MB – Well, I do not know whether we touched on this yesterday, but the English educational system is a little different. I have been writing essays since age eleven or ten, every week. Most Americans do not do that, and I think on the whole, it shows. I like writing, and I think writing is much misunderstood. I think the purpose of writing is that help somebody to understand something. It is like a marionette theater. The writer is the puppet master manipulating words to achieve an effect. I blame the American approach to teaching writing as self-expression. This is absolutely wrong for technical writing. It is not about self-expression at all. It is about me manipulating you into reading what I want you to read in it. I have always thought that technical reports are important.

When I was at the Office of the President, it was very clear that MELVYL, the online catalog, had some problems and that these could be solved by certain developments, but I could not do much without the approval of the nine University Librarians and they were not interested in doing all the things that I wanted done. The most obvious thing, in those days, was that when Boolean sets were retrieved, you either got too much or none, most of the time. What you really want, most of the time—not always, but most of the time—is a small handful of the least unsatisfactory material. So that should be the design requirement. You may have other options, but that should be the default requirement: Regardless of what your query is and regardless of what is in the database, you want a handful of the least unsatisfactory items, so that is what we need to design for. That was one of the things that I could not arouse support for, although the talent was there in the Division of Library Automation.

So when I evacuated the role at the Office of the President there was nothing stopping me. I did not need anybody's permission. The catch was that I did not have the resources to do it. I could not do it myself. I had to hire other people who could and that meant a grant. We used to get three or four thousand dollars routinely for research assistants each year, each faculty member.

RW – In the school?

MB – In the school. That is gone, but we used to and that was not enough. So, I wrote a grant proposal. This was in the days before IMLS, the Institute of Museum and Library Services. Not everybody knows that there was a program essentially identical to the IMLS National Leadership grants at the US Department of Education. They had a library unit and they issued grants that were similar. So I went to them with a proposal entitled “Prototype for an adaptive library catalog.” The original idea was that if you are always getting too much or too little, you should be able to issue a strategic command saying “more” or “fewer”. You can do that in a Boolean system, because you can add or relax Boolean qualifiers. In fact, we came to realize that people did not want more. They would want more *of this kind*. It is a sideways movement that people want, not just more. So I wrote a proposal to the US Department of Education and got a grant in 1990 of \$92,000.

I probably would not have done this unless Ray Larson were willing to help me do it because this is more his background. We got the money. We did it. Some very interesting work was done by some graduate students. That was the first step of a continuing chain of projects that is still going on.

RW – None of the other online catalog systems were using a more-like-this approach? This was before Amazon was using it, I assume.

MB – The nearest thing was some clever work under the direction of Stephen Robertson at the City University in London called OKAPI. That was the nearest. That was clever. And then I was asked to be part of a proposed multi-million dollar project funded by DEC [Digital Equipment Corporation]. The man writing the proposal needed a token information retrieval person and so came to see me and asked me to join in. I said, the person you need is Ray Larson. I played a cameo role. I did very little but I was able to get equipment out of it. For a brief moment I had the most powerful computer in the building on my desk even though I did not know what to do with it. That continued on from 1991 through '94 and then I got

another grant from the US Department of Education. It was Higher Education Act money and this was called “Online Access in Multiple Database Environments.” You could search here and search there and join the retrieved sets. That kept me going through ’96 and then, the phrase “information management” got currency. It had been used a little bit for spin doctors. DARPA, [the Defense Advanced Research Projects Agency], latched on to it and they announced a big call for proposals for a program on information management. I was teased at the School by people saying, well you are into Information Management. I had taught a course on information management, so we were using the term and so we joked that we should help DARPA. Some students said, “Well, why don’t you?” So I worked up a pre-proposal.

Part of the background to this was Ray Larson’s career-length dedication to developing the CHESHIRE system. One piece of this was developing an interface that used probabilistic methods. You put in whatever words you want and you get a ranked list of the Library of Congress Classification numbers that most closely coincided with what you seemed to be asking for. It is would now be called a search-term recommender service. It was for classification numbers originally, but later it was Library of Congress Subject Headings. There was a whole lot more to CHESHIRE than this but I said to him, if we saw off this bit and we could really do something with it. I wrote up this pre-proposal to DARPA which said, there is a vocabulary problem here, because all databases, all good, trustworthy databases have some sort of indexing, but all this indexing is more or less arcane and specialized and stylized and obsolescent. So you cannot use it effectively or economically unless you are familiar with it. If you are not familiar with it, you are not able to use it well. The title of the preproposal was “Search Support for Unfamiliar Metadata Vocabularies”. It was to develop search-term recommender services. To my surprise I made it to the full proposal level, but I knew I needed help on this because this would be a million dollar grant. So I asked Ray Larson to be formally the Co-PI and I asked Fred [Fredric] Gey, who had done his doctoral dissertation in the school on probabilistic methods in information retrieval, to join us. His daytime job was managing a social science data archive.

The three of us got a series of seven further grants over the next ten years from different sources to develop search support techniques initially based mainly on Ray Larson’s CHESHIRE “classification clustering” technique applied to sundry databases.

We came across strange examples in Federal databases. Suppose you were in Detroit and you were worried about the automobile market and you decided to look at the federal import/export statistics and you did a search on *automobiles*. The answer was, No such product. So you think there is a vocabulary problem, so you put in *cars* and the screen would fill up with all kinds of statistics about railroad and tramway rolling stock because for automobiles you had to do *PASS MOT VEH, SPK IGN ENG*, an abbreviation for passenger motor vehicles with spark ignition engines. That is fine for humans. It does not work very well with computers. What you need is a translation: If you want *automobiles* you convert it into this. That was one of the many examples we used in our proposals.

The first grant was nearly a million dollars. Then there was a new program officer at DARPA, Ron Larsen, now at the University of Pittsburg. He wanted to go multilingual but he had to persuade his superiors. Fred created a wonderful graphic that helped him get a grant program approved. It showed a map of the world with three colors. One color was for the areas for which there was workable commercial translation software. Then there was the area for which there was experimental language translation software. And then there was the rest of the world for which there was not any translation software. He then superimposed little icons of exploding bombs for every place where a US embassy or other installation had been blown up. They were in the areas for which there was no machine translation. We pulled out all our multi-polysyllabic vocabulary and put in a proposal which was entitled “Translingual Information Management Using Domain Ontologies.” That was approved for \$1.4 million and I discovered the difference between approved budgets and allocated budgets. [Laugh] We ended up with only \$400,000 of that approved \$1.4 million because DARPA lost interest in obscure languages.

RW – Well, I hate to interrupt your going through your grant proposals but we probably should quit. Well, I hope somehow or other I can put all this together, in the order in which you did it. I think we covered most of my questions.

MB – I would have continued after the DARPA phased us out.

RW – Well, go ahead, we probably have time, it is 3:43 p.m.

MB – We thought if text is digital and numeric data series—socioeconomic data series—are digital then we ought to be able to search across them. You could get very startling results if you tried to compare texts with facts. Fred found a statistic that there had been an explosion in imports of shrimps from Vietnam to Los Angeles. So what is going on here? He took words from the header and the label and the descriptions under the statistical table to form a search query. You could take *Shrimps* and *Vietnam* and *Import* and so on and throw them against indexes to newspapers. He found an article, written earlier than the statistic, saying that it was going to be a bonanza for California when political relationships with Vietnam get normalized. And everybody knows that employment in the lumber industry in northern California is in steep decline, but if you look at Humboldt County employment statistics you find it is going up. If you do research on the literature, you find that there is a big growth in wooden houses built near National Parks in that area, so the received opinion was wrong and that was the explanation.

This was cross-genre searching, between text and numeric data sets and it turned out to be really difficult for lots of reasons that are basically cultural. Socio-economic data series are a different world with different assumptions about interfaces and terminology. What epitomized it was the problem of dealing with place. When searching bibliographies and catalogs, you rarely use place and, if you do, you mention a place name. However, you cannot search socioeconomic databases without specifying place and you have to do it in their terminology, which means census tract, jurisdiction, or some such. But people do not say, I found this nice little Italian restaurant in census tract so-and-so. They do not say that. They use place names which may not be formal political jurisdictions. And the boundaries and names of jurisdictions are unstable over time. Places in Europe commonly have two or three names simultaneously. The French can't even spell *London* right. It is a really interesting problem. We had not really thought about the problem of place. So we wrote a proposal to IMLS called "Going Places in the Catalog". This had to do with the duality between place and space, place name and geo-referencing. It was a nice project and it tied in with my involvement with Electronic Cultural Atlas Initiative.

Then we realized that there is a problem related to time that is very similar to place. If you listen to how people talk, people do not use calendar dates much. They say, "when I was in Florida", or "when I lived in Berkeley," or "after I sold my house in Kensington." That is how people talk. They use historical events as chronological markers. It is highly cultural and it is highly situational because you have to know the person and the situation to know what "after I graduated" or "before I was married" and this is the sort of stuff mean in calendar time. We already got a little leverage on this, because a clever doctoral student, Vivien Petras, who is now on the faculty in the Berlin Library School at Humboldt University, made a named historical event directory, modeled on a place name gazetteer.

Periods are specific to places. If you have a "Civil War period" pamphlet, here it means that it is a nineteenth century pamphlet. If you say that in London, England, it would be a seventeenth century pamphlet. In Spain it would be twentieth century pamphlet because "Civil War" has different meanings in different contexts. She made a nice little time period directory by strip-mining chronological subdivisions from the Library of Congress Subject Headings system which normally have the name and the place and the dates. So the name of the event "Weimar Republic" has a very specific meaning. It was Germany during the period after the First World War and before the Nazis took over. You have the name of the period and you have the calendar dates, but you should also say where. If somebody says, "When was the Stone Age?" the only good answer is "What part of the world are you talking about?" This is also true of place names, because it is not only where, say, Edo (now Tokyo) was but there was a specific time when it was called Edo. So, for place names you also have to say when and for historical periods you need to say where.

We started with *What*, the searching of unfamiliar metadata vocabularies. Then we went to *Where* and then we worked on *When* and *Who* as well in a project called “Support for the Learner: What, Where, When, and Who.” We did that without having really worked through the *Who*, so went on with a “Bringing Lives to Light: Biography in Context” project which was inspired by the structures and content of “Who’s who” entries. What a “Who’s who” entry means to you depends on how much you know about the words in them. So, Goldberg got his PhD in Chemistry from Leipzig in 1906. If you do not know where Leipzig was and you do not know what a PhD in Chemistry would have involved then and you do not know what student life in Germany in 1906 was like, the statement does not mean a whole lot to you. These words are really concentrated in what they mean and the more you know about them the more meaningful they are. So you need links to good explanatory reference works. That was the biography project.

What that meant was that if you are reading anything on a screen and you see an unfamiliar word, what you need to be able to do is to click on it and get a trustworthy explanation. Would or would not that be cool? This goes back to the notion that learning depends on what you already know. It is a matter of building or correcting what you have already heard or already know. Therefore, if you want to learn, the best place to read would be sitting in a library reference room, where the collection has been optimized for you and for what you are reading in terms of choice of reference works and how they are physically arranged. And if you decide to read something else, you need a different selection and a different arrangement. And when you are finished and another reader comes, another different arrangement is needed. That is difficult to do with a library reference collection so I became interested in how reference service should be done and how it could be supplied to anybody’s laptop.

This was greatly influenced, like a lot of what I have done in recent years, by my experiences doing detective work on Goldberg. I spent so many hours in so many reference libraries looking vainly for stuff I could not find. I had fantasy that it would be nice when I walked into the huge reference and bibliography room at Berkeley if you could mumble or think your topic and little green lights would come up on the shelves under the books that mentioned it. [Laugh] Now, would that be good or not? If it would, that is what we need to do. The National Endowment for the Humanities and IMLS initiated a joint program called Advancing Knowledge. It was administered by NEH, but I believe it was mostly IMLS money. We put in a proposal to, basically, reinvent reference service. We built, or, more accurately, Ryan Shaw built, a series of prototypes that progressively did this. The latest one is an extension of Firefox, because you want it embedded in your normal working environment. In principle, for any text you are reading, if you see a word, you click on it, if you right-click a word, a menu comes down, a customized list of the most trustworthy resources, customized for you and for the topic. A list of resources appears in a column on the left of the screen and while you gaze at it in awe, each changes color because the interface is doing a background search. It goes red if that word is not mentioned in that resource and it goes green if it is. If you click on a green one, it takes care of the search for you and presents you with a window with the entry inside that resource pertaining to that word. We did not manage to finish it within the grant, but we intended that you then click a button and it pastes the fact of the successful search as a link in XML behind the text so it is ready for the next reading or the next reader. When that is done, the next step would be to take this text with all the XML marked up, throw away all the text, keep all these links, reverse them, and then you paste them into the reference works. So that the next person to look for, say, Rathlin Island in the gazetteer of Ireland will know that it is mentioned in that article.

Part of the interest in this work is that when you look at the literature on reference research, it is deficient because, especially in the United States, they redefined reference service in an appalling way. They restricted it to only where the librarian intercedes and finds it for you.

RW – And mostly to fact-finding.

MB – Yes. Most people would prefer to find things for themselves. So whatever happened to the provision of a reference *collection*? I was approached by *Library and Information Science Research*, which was celebrating its thirtieth anniversary. They marked it contacting people who had been on the

editorial board, which I had been when it was founded. They said they would like an article. I agreed to do it provided I could write a polemic on how everybody had got reference research wrong. I did and it was immediately the most downloaded article that journal had.

Something that we have not touched on that relates to my work is that a charismatic friend called Lewis Lancaster spent his life studying how Buddhism changed as it moved north out of India, into the Himalayas. It could not go west because the Persian Empire did not allow merchants in, so it went east into China and Korea and Japan, evolving as it went. When he reached retirement, a friend said, why don't you write up your life's work and make a nice book? He could see the merit in this, went to see a publisher, and explained how many maps he would need in this book. According to the legend, the publisher did some calculations and said, if we really did the maps you wanted, this book would retail at about four thousand dollars a copy. Maybe there is some other publisher you would like to talk to. About that time he discovered digital maps. The main attraction of digital maps is that you can make dynamic maps that show change over time, like a video. He invited some scholars, mostly in the humanities, back to his home on the coast at Stinson Beach and they decided something should be done about it.

They created the Electronic Cultural Atlas Initiative (ECAI) to do something about it, not that they really knew quite what they were going to do, but something needed to be done. At that time, there was no affordable software available for dealing with change over time in maps. An archeologist in Sydney had developed some clever software that would not only do that, but have an associated catalog of internet-accessible resources that would enable you to find and download geo-referenced data, then edit it and treat them as map layers and all this type of stuff. Time Map, it was called. This was long before the Google Map software. This was really interesting and Lewis is a very persuasive character. He persuaded me to become Co-Director of ECAI with him. It had been found an administrative niche in the University by the then-Dean of International and Area Studies. I think that campus support peaked at ten thousand dollars per year for one year only, so it has had to be self-funded.

Foundations are willing to start new initiatives but they do not want paternity orders. They do not want to sustain things. It became increasingly difficult to fund this operation. It is an altruistic venture. It is trying to change the world by changing how scholars in the humanities and softer social sciences deal with time and place and it is hard to fund altruistic ventures. We were organizing an international conference every six months, moving from continent to continent, using a whole network of friends and contacts. The most interesting people come out of the woodwork saying, I have got this data. I do not know what to do with it. Help me! We have sustained it, two retired grandfathers and valiant volunteers, by shifting to research proposals that advance the interests of the Electronic Cultural Atlas Initiative but are also research projects for which he or I have credibility as researchers. International and Area Studies was a victim of financial cuts and in April 2010 ECAI was reassigned to report to the Dean of the School of Information, which was a great improvement. This is a public service activity and it is really very interesting.

RW – Alright, glad you got to cover a little bit of that. Thanks so much for sitting patiently.

End of Interview and transcript
