

China Trip, September 1983

It was my mentor Sir Rex Richards who triggered this off. He had been invited to make a lecture tour of China, but was concerned about travelling alone as he has a recurring back problem that could let him down at any moment. I was delighted to agree to accompany him, and I can only assume that the Chinese authorities were prepared to accept two lecturers rather than one. After a few months Rex called to say that he felt he really could not manage such a demanding trip, and would I be prepared to find another scientist to fill his slot. The obvious choice was my old friend Keith MacLauchlan and he readily agreed to this joint adventure. Talks on nuclear magnetic resonance (NMR) and electron spin resonance (ESR) go well together. The travel arrangements were made by the British Council through a "Scientific Exchange" program, although in retrospect we might be tempted to conclude that "all the reciprocity was on one side" because the Chinese sent their scientists to study in the West and then return to the homeland with their new expertise. But we were certainly not complaining.

We flew from Gatwick into Hong Kong. It was hot and terribly humid and the first big mistake was made at the hotel in Kowloon when we both independently drank the tap water and discovered what should have been second nature to all British expatriates - never drink their water. Dire consequences, but I recovered faster than Keith for some reason. I ventured out into the hurly-burly of Kowloon to buy a camera and film, only to discover that the film was far too fast (1000 DIN) for any known camera of that epoch. And we thought the Americans had invented "bait and switch". On the whole we found the Hong Kong blatant commercialism very unpleasant, and sensed a barely concealed contempt for us gweilos. Fortunately the very next day we flew on to the mainland on a China Airlines flight to Beijing. The crew were all smiles and brought small gifts to the passengers, sweets and tiny toothbrushes for example (poison and antidote?). On arrival we were delighted to be met by two friends we knew - Mr Pei, Feng Kui, who had worked with me in Oxford in 81-82, and Mr Meng who had worked with Peter Mansfield at Nottingham University. We had accommodation at the huge "Friendship Hotel", built originally to house Russian visitors, with an appropriately inhuman architectural style to match. Keith was muttering about some comparison with East Germany, of which he had first-hand experience.

Left to our own devices, we had considerable trouble finding the hotel restaurant. We were then astonished to see, at the next table, our old friend Jack Roberts from CalTech. He had almost finished his own lecture tour and imparted the alarming information that in China we were expected to give talks that were three to four hours in length. For someone who had carefully prepared standard lectures of 45 minutes plus questions, this really threw the cat among the pigeons. Jack then carefully instructed us both on the "ultra slow mode" by which any talk can be stretched indefinitely - deliberate mistakes in the maths, later painstakingly corrected, time out for occasional breaks, and of course the two-for-one multiplier to allow for translation (sequential, not simultaneous). Still it did warrant some hasty reassessment of my lecture notes. In retrospect we should have included a few slides of Oxford College architecture to eke out the breaks; the Chinese were amazed by the few Oxford prints that Keith had brought.

The stay in Beijing was divided into lecturing, sightseeing and obligatory rubbernecking

around the Physics Institute. The latter exercise I find quite exhausting, but we were the 'distinguished visitors', and were expected to behave accordingly. But we have long ago learned the trick of making superficially intelligent comments on the experiments of complete strangers in entirely different fields of research. Keith had a visit to the Summer Palace while I gave my first talk. As Keith kept careful written notes of our adventures, all the descriptive details are available in his comprehensive diary, later printed out. Early the next morning we were driven for about two hours to visit that part of the Great Wall that has been restored. In those days, before the more recent explosive industrialization of China, the only other road traffic was a vast sea of bicycles, all riding at the same pace, and paying scant attention to the occasional car, even though it would be sounding its horn virtually continuously. Maybe we were tired (and we had missed breakfast) but climbing along the wall was exhausting; the inclines are very steep and only revert to actual steps in extreme situations. Lawrence and Veronique will remember this experience. For the tourists there were two Bactrian camels tethered near the wall, and somewhere I have a photograph of Keith proudly enthroned between the two humps. Our trip continued on to see the Ming tombs, of which only two of the expected 15 have yet been unearthed, they were so carefully hidden.

The next stage was a flight to Changchun in the north, with an unexpected stop at Sheng Yang. The plane was an ancient Russian turboprop, and as our window looked out directly onto one of the propellers only a foot or so away, it was hard not to speculate on what happens if part of the blade breaks off. These internal flights proceeded with great caution, at low altitude, and with a careful eye on the weather, so I don't suppose they bother too much with timetables. In fact this was one of the delightful aspects of China (in those days) - timing was of no great consequence. Our arrival in Changchun was after dark, and since there are very few street lights (if any), driving was quite scary because at night there are Chinese couples walking hand-in-hand along the roads in the dark. This was the only time we actually saw any overt sign of affection between man and woman. Is this a cultural or a political thing?

Changchun is where Mr Pei works. It is a city of 1.5 million souls, built mainly during the Japanese occupation. We were surprised to see notices in English as well as Mandarin, probably as there was an effort to promote English for use with computers. Of course language (our lack of Chinese) created all kinds of problems throughout our stay; there are severe limits on sign language and wild gesticulation. Our accommodation in Changchun was the best we encountered - there were mosquito nets over the beds (greatly appreciated). There was even a bowl of sugar on the table, something we had sorely missed elsewhere, but it turned out to be an enormous disappointment when added to coffee - it was in fact coarse-grained salt. At the Institute where the lectures were held it was brought home to us how much trouble the Chinese had taken to make us welcome. We went up in a large freight lift, fitted with a beautiful Chinese carpet that was rather too large for the floor size. We realized that this was a special extempore "VIP" touch because later the carpet had disappeared. Mr Pei did the translations for my talk. I had already learned at meetings in Russia and Estonia how to break a talk into quanta of two or three sentences and then wait for the translation. Mr Pei had no difficulty as an interpreter. But I remember how at Oxford, when stuck for a translation into English, he would trace out the corresponding Chinese character in the palm of his hand.

We were given gifts of original Chinese paintings; fortunately the British Council had already warned us to have suitable Western gifts with us to return the compliment. The NMR laboratory had a Varian spectrometer and was treated with almost religious deference - one had to change shoes and step over a low wooden barrier to enter the sanctum sanctorum. It is true there was a great deal of dust around. That evening we had a very special Chinese banquet to celebrate the Moon festival. There were many, many dishes, three different alcoholic beverages, and several toasts back and forth; the alcohol definitely helped. We particularly enjoyed the moon-cakes, a four-inch round shell of pastry stuffed with various fillings and stamped with the appropriate Chinese character on the face. This was probably the only "pastry" we encountered in China, and we never saw milk products. Our hosts took it upon themselves to serve us the more exotic morsels - sea cucumber was not exactly my cup of tea - but it was unthinkable to decline, and this automatically ensured that they gave us repeat servings. All in a delightfully relaxed atmosphere, with lots of good humour. I found that here (as in Japan) there came a point where jokes in the local vernacular nevertheless seemed funny, and it was easy to laugh. All in all, Changchun was one of the real high points of our trip, but soon we had to fly back to Beijing. The unfortunate Mr Pei was bumped from the flight and had to take a long train journey to Beijing. I wonder if I really thanked him enough; we still exchange Christmas cards every year.

The next day in Beijing we were driven with Mr Meng to Tienamen square and the Forbidden city, constructed in 1410 - a must for Western visitors. I leave the descriptive details to Keith's excellent notes. We saw entrepreneurs developing film using several buckets of chemicals under a wooden bench, but it was all black-and-white stock of course. When I changed the (colour) film in my camera, I was surrounded by a crowd of curious onlookers, surprised to see that one could do this in daylight. There were several old men flying kites in the enormous square, mostly made in the form of birds. Mr Meng told us that there were very few laws in China, except exhortations to follow the Thoughts of Chairman Mao (not always easy to interpret). Later the brutal suppression of the "democracy" movement in this very same square rammed home the point that rocking this particular boat was not permitted.

Early the next day we set out for Wuhan, which is actually three adjacent cities - Hankow, Hanyang and Wuchang on the mighty Yangtse river. We were accommodated at a slightly run-down hotel frequented mainly by Australian tourists, and for once had to share a suite of rooms. It was back to the mid-Victorian age with the small TV set tastefully hidden inside a dark-red plush cover; we never used it. After fixing the flush toilet as we had learnt to do everywhere in China (there is no conventional ball-cock, just a suitably sized block of polystyrene as a float) and noting that the light switch was activated by a very ancient cord, we set out for dinner. On our own here in the hotel, the language barrier almost defeated us, and ordering a particular menu had absolutely no effect whatsoever. We were regularly offered "banana juice" to drink. This turned out to be a bilious green fizzy drink, and when one day they asked if we would prefer orange juice we leapt at the offer, only to find the same bilious green fizzy drink.

Although there was beer available in those familiar brown glass bottles with crimped metal caps, we politely declined because we had observed them refilling empty bottles with left-over beer and then recapping the bottles. Keith was quite dismayed when I

pointed out a small mouse crossing the restaurant floor, but he apparently accepted my rather specious argument that this was a good sign that mouse was not on the menu. It was about this time that we both realized that the only thing that saved this trip was to be a party of two that could have a big laugh at the various contretemps. In particular, the shirt saga. Keith sent seven shirts to the laundry and only five returned. Protracted negotiations with the young girls that seemed to run the hotel only elicited giggles and the adamant message that all the shirts had already been returned. Careful consultation of a Mandarin phrasebook suggested that "chi" (qi) was the word for seven, so every time we saw the reception girl we laughingly chanted "chi, chi, chi", more in hope than expectation, until one fine day, much later, Keith's favourite two shirts came back. We had been allocated "minders" to make sure we got into no trouble. As we did not know their correct names we evolved our own private nomenclature: "laughing boy No. 1", not to be confused with "laughing boy No. 2" or "Shanghai wallah" for the third interpreter/political officer.

My first talk in Wuhan Institute of Physics had as translator Xi-Li Wu, who was the daughter of the Director of the Institute. Xi-Li later came to work in my group in Oxford and even moved with me in 1987 to Cambridge. A charming young lady with impeccable English, a hard worker who produced a total of 17 scientific papers while in my research group. Eventually we were able to bring her husband Ping Xu out to Cambridge (initially it had not been evident to us that she was married) and they worked together. Ping had a much poorer command of English, exacerbated by his tendency to say "No" when he meant "Yes". We mostly communicated in the language of product operators (a sort of NMR mathematics). Both wrote fine doctoral theses. They then went to work with Richard Ernst in Zurich and later emigrated to Canada (Toronto and then Montreal), where they now have two beautiful children. I imagine this would not have been allowed in China.

Wuhan therefore was our base. I managed to spin out my lecture material, apparently without offending the audience. I suppose this is where I fell into a rather slow measured style of speaking which stood me in good stead with foreign scientific audiences worldwide, but which irritated Cambridge undergraduates. Indeed my Chinese audience seemed very keen and would take away my slides each evening to work on them in detail. At the end of each talk a group would gather at the blackboard to explain to each other in Mandarin what I had really intended to say, often getting into quite heated discussions. We learned that several in the audience had travelled large distances to Wuhan to hear these lectures, actually arriving a few days early owing to poor communication across China.

Wuhan is a very large city but rather off the beaten tourist track, and we felt we were at last seeing the "real" China. Everyone travelled by bicycle, and these often carried enormous burdens, requiring help from one or two extra men hauling on ropes in order to negotiate any inclines. It seemed that everyone was dressed in white shirts worn outside dark trousers - it was not until we got to Guangzhou close to Hong Kong that we saw any colour. But Mao suits were clearly off the menu except at formal banquets. Work went on relentlessly from dawn to dusk, and there were hundreds of shops and small businesses opening onto the street making all kinds of clothing, wooden or metal artefacts, often spilling onto the pavement for want of adequate room inside. Further out into the country, roads might be blocked by huge piles of grain waiting to be

threshed. Everyone seemed to be happy and always ready to smile. Young boys congregated outside our hotel for the hilarious spectacle of obese Australian tourists emerging. I could see their point; we saw no overweight Chinese at all, for obvious reasons. Each day we were driven a considerable distance back to our hotel for lunch, and then back to the Institute to perform. It seemed clear that feeding foreign visitors put a real strain on resources; except for one embarrassing occasion, we never had meals with the Chinese scientists. By this time Keith had become adept with chopsticks and was looking rather less emaciated.

In the evenings we were free to wander around the district unchaperoned. Prior to our trip we had been warned to expect to be surrounded by crowds of curious Chinese, but I never found this happened, although it was quite obvious how different we were, if only in height and colour of hair. Occasionally someone would appear and ask if he could walk alongside and practise his English. I even ventured into a huge port terminal on the Yangtse, bustling with activity; no-one paid the least attention. Innate politeness or indifference? If there was interaction, it was only to give a happy smile. Quite a contrast with Japan, where their in-bred politeness is always in conflict with their negative attitude to gaijin. What makes the Chinese such happy and relaxed people? Is it still true today, in their frenetic pursuit of modernization?

We were a little surprised to discover a department store not far from our hotel. It contained a chaotic jumble of products covering a range from clothing and bicycle parts, to lots and lots of electric fans, which seem to be the only way to combat the extreme heat in summer. In winter it appeared to us that there would be no heating at all in the Institute, so one presumably went to work in thick overcoats.

The Institute of Physics boasts an ornamental artificial rock formation that actually serves as a fountain some 25 feet in height. This is the (rather ugly) showpiece used as a backdrop for group photographs; somewhere in my files I have the result. There are many colourful flower-beds, but the effect is rather spoiled by the generally unkempt nature of the grounds - no funds for gardeners. This stands in stark contrast with Jesus College where gardeners are constantly at work keeping the lawns pristine and the flower-beds in tip-top condition. We are terribly privileged in Oxford and Cambridge.

It was clear from our explorations of Hankow that the Chinese employ tremendous ingenuity to make the most of the materials at their disposal, and that they recycle anything that can possibly be reused. Hotel maintenance adhered to the same principle. I have already mentioned the venerable cord used to switch lights in our bathroom, where the ceiling was some ten-foot high. When the cord inevitably broke, we called reception and explained the problem, mentioning that a ladder might be necessary to do the repair. Eventually a man arrived (no ladder) and surveyed the scene. At his second attempt he cobbled a repair by the simple expedient of tying a knot; of course this only led to a repetition of the problem; the cord was quite rotten. Apparently labour is so much cheaper than a new cord. I am reminded of the opposite extreme in Palo Alto in the 1960's when the Hewlett-Packard factory ran their fluorescent lighting continuously for months on end and then replaced all the tubes in a single operation, whether they were working or not.

Our departure from Wuhan was complicated by the fact that we had been bumped from

the expected flight. It transpired that visitors to China fall into three distinct hierarchies: (a) tourists paying in hard currency, (b) invited scientists like ourselves, (c) foreign businessmen. Our seats on the plane had been pre-empted by category (a) visitors, so we were to take the train to Guangzhou. I think our hosts were rather embarrassed, but we had a great send-off by the entire contingent -- Director Wu, Mr Pei, Mr Meng, laughing boys one and two, and Shanghai-wallah. We were in fact sad to leave.

In England any steam train that has survived is a thing of beauty, all shiny brass and polished paintwork, lovingly restored by local enthusiasts. In China a steam train is an ugly black monster, the ironwork rough-hewn and strictly utilitarian. The hot weather ensures that all the windows must be left open, so a shower of black greasy soot invades the compartments. We shared our sleeping accommodation with two disillusioned French businessmen, who turned out to be very good company on the 18-hour journey to Guangzhou. Someone commented that the decorations in our compartment were reminiscent of *un bordel des années trente*, particularly the small red table lamps, as dim as they could possibly be. Actually electricity was always in short supply all over China, and through the night journey we saw very few lights at all in the countryside we were passing through. We slept little; all in all it was an uncomfortable experience. When we finally arrived at a Western-style hotel in Guangzhou, I took a bath and, horrified by the amount of grime that washed off, immediately ran a second bath. Western habits were beginning to reassert themselves already.

There was of course a cultural step-function between mainland Gangzhou (Canton) and commercial Hong Kong (still under British administration), but this interface had been smoothed somewhat by the relatively easy access by train. So we saw colourful clothing for the first time, and advertising billboards ("Plying Figeon Bicygles" [sic]). We were particularly impressed by several shops that sold only bicycle seats, spanning all the possible garish colours of the Chinese imagination. I suppose this is one way of expressing some individuality. On the theme of lost in translation, our hotel toilet was out of order, "Repressaction". Keith's notes remind me that we had to attend a formal reception to mark the 34th year of the People's Republic, but that memory has mercifully faded with time. The next day we took the train to Hong Kong, suddenly thrust back into the mad, mad world we had escaped for one brief, surreal episode.

Ray Freeman FRS; August 2009.