## July 2002 8 PhD

When we arrived home in 1963 we stayed for several weeks with Jean's parents in Luddenden Foot, near Halifax, during which time our second son, Robert, was born.

The summer was spent teaching at the Summer Institute of Linguistics near Merstham. This was to be our location every summer that we were home.

From Merstham we moved to a house in Bishop's Stortford which we were able to use whilst the owners were abroad. The aim was for me to study at the School of Oriental and African Studies (SOAS), a college of London University, for a Ph.D. in General Linguistics.

Most of our goods were packed in oil drums and were coming by sea. It took many months for them to arrive, but they came just as we were needing them in Bishop's Stortford. The first year at SOAS I travelled in to the College regularly for lectures.

When the owners of the house were returning from overseas, we had to find another place to live. We were able to rent an upstairs flat in Purley, then later move to a house in Coulsdon.

Years two and three of the Ph.D. course were spent largely at home, with occasional visits to College to see my supervisor. We had used a little tape recorder to store examples of Tho speakers telling of their experiences, or talking about life in general. These I transcribed, and then tried to work out the grammar of the language. My thesis was to be called, 'The Syntax of Tho, a Tai language of Vietnam.'

How do you set about investigating the grammar, given a set of texts? It seemed that edge-punched cards might help. I used IBM cards, with holes punched round all the edges. I wrote a sentence on each card. If the sentence had a particular feature, then I clipped the hole which I chose to represent that feature, opening it up to the edge of the card. When I held the deck of cards together, and pushed a knitting needle through that hole, all the sentences with that feature would drop out. It was like a poor man's computer.

Meanwhile, the Summer Institute of Linguistics had received a grant to process tribal text material into concordances. I sent off my material, transcribed all in capital letters. Tones had to be represented by extra letters after each syllable, just like the way telegrams are coded in Vietnam. The material was processed on a computer in the United States. I received back many pages of computer printout. Every word in the resulted in a line for the printout. The word was printed in the centre of each line, with the context in which it appeared printed around it. The lines were sorted so that all the occurrences of one word came together. It was easy to see how a particular word was used, because you could examine all the occurrences of that word in successive lines.

This was a marvellous help, but it was a little like a dictionary or a telephone directory. You were endlessly searching, and sometimes you forgot what it was you were looking for. The thought came, 'If a computer can do this, why can't it work out all the grammar?' My ambition then was to learn how to program a computer. The aim was to write a program which would read in text material, and print out the grammar of the language as its output. After 40 years I am still trying.

There was a computer in the University of London, the Atlas. It was possible to get an allocation of free time on it. The first step was to attend a programming course, which was in a little-known computer language called EXCHLF. Then I tried writing programs in this language. To write programs which would manipulate numbers was easy. However, I had to write programs which would handle characters and words. This was the aspect of programming known as 'character manipulation'. Words were of variable length, so how do you store them on a computer? The staff at the computer centre were very helpful. They taught me that the characters in words could be daisy-chained together, a technique known as 'list processing'. Altogether, I was learning non-numerical programming, a skill which was not so common among computer programmers.

One day the head of SOAS received a bill for more than a thousand pounds for use of the Atlas computer. I was called into his office. He was worried, and so was I. There was no money to pay such a bill. To our relief, we discovered that those running the Atlas simply sent out such forms to show people what the amount would have been if they had charged. Use of the computer was still free.

Our third son, John, was born when we were living in Purley. Our daughter, Fiona, was born in Coulsdon just a few weeks before we were due to leave England again.

The thesis was completed, and I was examined and passed. We had asked the dependable travel agents used by Wycliffe to find us a ship to return to Vietnam. We were surprised that after several months we had heard nothing from them. When we enquired, we discovered that the only ship they had been able to find in that time started from Marseilles, went via Yokohama (doubling the distance) and to cap it all, would not take children. The war in Vietnam had escalated and this was the result.

In consultation with our leaders it was decided that we should head for India, as a new branch of the Summer Institute of Linguistics had opened there. We should give what help we could to the first-term workers who had assembled there, and should seek to return to Vietnam when and if the way opened up.

So in the spring of 1966 we boarded a P&O liner bound for Bombay. I had very much enjoyed my introduction to computer programming, but it had not helped me with analysing the syntax of Tho, and it looked as if I was saying goodbye to computers until we returned to England once more, whenever that would be.