SABBATICAL LEAVE REPORT

ERNEST D. MOHNIKE

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Sabbatical Leave Report

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Travel

The sabbatical leave included eleven months of study and travel in Europe. Both of these were rewarding experiences that should be of benefit in my college teaching.

My wife Marilyn, my three children, and myself traveled for eleven months and for 28,000 miles throughout Europe. In all, we visited twenty-one countries. Our mode of travel was a Volkswagen camper bus, in which we lived for the majority of time: 256 days out of 340. This was a very satisfactory way of seeing Europe and was an outstanding family experience.

We landed in Luxembourg where we picked up our bus. However, all of us had brought the flu with us and so the first two days were not entirely pleasant. Upon recovering, we equipped our bus and started out. We stopped to buy groceries in a tiny village in Luxembourg and when we saw the store we knew our year was going to be full of surprises.

We went north through West Germany along the Mosel, Elbe, and Rhine Rivers. The German farms are perfectly maintained and use all of the available space. The skill and industry of the Germans were apparent at each farm

and factory.

We continued north through Denmark, Sweden, and the length of Norway until we arrived at Hammerfest, the northernmost city in the world. Norway was the most delightful country we visited. The cities were clean and modern and the countryside was very beautiful. However, it was the Norwegian people that seemed to work so hard to make us feel at home that impressed us the most.

We then traveled the length of Finland and after a week's stay in Helsinki we went into Russia. We had intended to go to Moscow, but due to a tight schedule we spent only one week in Leningrad. This turned out to be a highlight of our trip. We became acquainted with our camp director, a college student majoring in the Cambodian language, and he helped us to see and enjoy the city through the eyes of someone who loved it. We were free to travel almost anywhere around the city and besides the many friendly Russians, we saw all the sights and spent a day viewing the Hermitage collection in the winter palace of the czars. At this point none of us had had much experience with art but we were off to a grand start. We were sorry to leave Russia but glad to get out. The feeling of freedom in Finland was unmistakeable.

We then went south back to Sweden, with it's modern everything, for a stay in Stockholm, then to Denmark and

Hamlet's castle, and Copenhagen. After a winding path through West Germany, we decided to go to Berlin. We were camping in a campground that bordered on the wall. It's effect on us was profound. From the Berliners we met and the feeling we got there, the wall cannot always divide this city. We went to both East and West Berlin and left with an amazement at what both sides had done.

From there our destination was Istanbul, Turkey; but first we, along with nearly every other American in Europe, went to the Octoberfest in Munich. It was great, but Munich has two other attractions that impressed us more. One was the churches restored in a modern motif that was awe-inspiring and the other was the science museum, which must be one of the best in the world.

After traveling across Austria and visiting Vienna, we plunged back behind the iron curtain to travel through Hungary to Budapest with it's giant Russian war memorial that was shot full of holes by the Hungarians, Then on to Bucharest, Romania, through Bulgaria to Turkey. The people in these countries were not as accustomed to an American family as those in western Europe and we felt that they went out of their way to be helpful. On the whole there were few people there who spoke English, but this caused us little difficulty and we enjoyed our stay there very much.

After leaving Bulgaria we arrived at Edirne, Turkey. This sticks in my mind as one of the most magnificent sights in Europe. The minirets towering above the city as it looms ahead mark the beginning of many new sights and experiences. I really cannot say I liked Turkey. The people are too poor and unhealthy and the living conditions are too run down for me to feel at ease. In many respects it is like Tijuana. Everything is either too poor or too rich or tourist. We were impressed by Istanbul, but like Russia, we were glad to leave.

Greece, on the other hand, made us feel at home. The countryside is very much like we are used to, and although there are many poor, the poverty is hidden by a new coat of paint. The thing we found most disturbing was the ever-present military. The lack of freedom was more apparent here than in the eastern block countries. We felt that the antiquities of Greece were the most striking we had seen. The feeling one gets at the Acropolis, the Temple of Zeus, Delfi, or the stadium at Olympia defies description, but leaves you with a grand feeling for the past. With Greece, you feel you would like to go back to see the same things over.

We took the ferry from Greece to Italy, where we spent a month traveling from Sicily in the south to Milan in the north. Italy was full of Michelangelo, girls, and Fiats.

The weather was turning cold and we headed north through Switzerland to Horben, West Germany, where we enjoyed a white Christmas in the Black Forest. We stayed for a month in this small German village near Freiburg. The people we met there were quite different from the traveling Germans we had met around Europe. They were quiet farm people and after nearly eight months of travel the rest was what we needed most. The weather was too cold for sightseeing so we decided to see Spain and Portugal and soon after January 1, we started south again.

Spain seemed to have a wall separating the tourists from the Spanish people. The modern apartment houses, hotels, and restaurants were very European and for the most part, were little of Spain. It was only when we were forced to stop for several days in a small town because of washed out roads that we began to appreciate Spain and it's people. Later, when we were stopped by snow in a tiny village in northern Spain, we glimpsed Spanish life close up.

While in the warm south, we visited Portugal. The cargo sailboats of Lisbon were a sight we would not have missed. The number of small boys working on the roads of Portugal left us with a feeling that poverty was there to stay.

Although we were still in winter we again went north,

through France to Paris. The weather there was very bad and accomodation for a family unavailable. This caused us to cut our stay in Paris short. We visited the main tourist places and of course the Louvre, which made even Paris bearable in the winter. Western France, in Normandy and Brittany, was more temperate and the small farms made it the part we enjoyed most.

We crossed to England about March 1 and snow was deep on the cliffs of Dover. After a couple of hectic days, we found a small flat in eastern London (Bow) and started enjoying London. The English seemed very warm and friendly. One day a taxi driver stopped to ask if he could give us directions and we realized the friendliest people anywhere must be in London. Even the cold winter could not keep us from enjoying the city. We spent a month there and could have stayed longer. After living for about two months with the British, we felt that we, as Americans, could learn many things from them about the qualities that make up a good life.

Early in April we felt winter was over and we started out to tour England, Wales, Scotland, and Ireland. The trip was wonderful, but winter stayed with us. It snowed nearly every day. There were many special places, but the western plain and coast of Ireland was especially nice. The Scottish heather of the highlands was very brown, but

against the lochs and the snow, it was still stunning.

We went back to the continent around the first of May and headed through Belgium to Holland and the tulips. We shipped our car to New York and spent three weeks in a small town in the tulip region. If all of the people of the world were Dutch, the planet would be a garden. We enjoyed Holland very much.

On May 25 we left for New York. We had spent eleven months in Europe, visited twenty-~~three~~ one countries, and driven over 28,000 miles. It was worth it.

School of Mines of Paris

(1130 System) March 3, 1970

This was a broadly based engineering school in the heart of the Latin Quarter of Paris. It was housed in a building 250 years old and certainly would not meet the Field Act.

The school itself was nearly (as far as I could ascertain) at the top of engineering schools of France. The students they receive are chosen by test and they have completed all of the normal French primary and secondary education and in addition two years of preparatory school. This preparatory school appears, at least in math, at about the level of Mt. Sac! The degree offered at the School of Mines was about the same as a Master's in Engineering in the U.S. The school offered more math in the first year: numerical analysis, algebra, etc.

The student was first exposed to a course in Fortran in the second year (this would be at the senior year of an American university). The course is taught so as to give the student a good background in computers before the Fortran is taught. The caliber of students allows very high level problems. The emphasis is placed on solving real problems of importance, not "playing with the

computer" (compilers, error analysis of problems).

The work of teams is stressed with different students writing part of a difficult program. They, Dr. Schauvliége and the IBM salesman felt this was where American education excelled and was a major weakness in French education. They pointed out that Apollo was a team effort. We talked at length about the merits of the students having actual physical contact with the computer and they felt that this was both not possible in their system and undesirable in any event as it would promote "playing", not real problem solving. They felt that the element of motivation was not necessary for their students.

The computer itself was located in a basement room about 10' x 20' including a 1132 processor (like ours), a card reader (like ours), a high speed printer and support equipment plus one small telecommunication instrument.

The 1130 was used almost exclusively in conjunction with a 360 modal 40 at Fontainebleau, about 25 miles away. The program in Fortran was loaded into the 1130 card reader and scanned for errors (syntax). If there were none, it was transmitted to the 360. A few minutes later, the results were sent back. The 360 program automatically delayed long programs to nights or weekends to avoid long delay as the problems were not done simultaneously by the 360. By use of a control card the Fortran compiler of the

1130 could be used but this was not the usual case. In essence, the 1130 acted as a remote terminal of the 360 but it also prepared the input to the 360 so teletransmission would be efficient. The support for this system was written by Dr. Schauvliége and others and is not supported at this time by IBM. At present there are two 1130's on line and more are planned. The teaching of Fortran is not now taught at lower levels but plans to go as low as secondary school are being considered.

West Ham College, London

D.E. Hanley

The 1130 system was used for teaching, research, and administration. The daytime was devoted to the students. The computer was very busy and Mr. Hanley could see the students being pushed into more and more batch processing. He felt the students must have their hands on experience. We spent some time talking about how to solve this problem. Express runs with no program listing help. In this time, no long jobs are permitted. A compiler that was especially suited for that kind of job would make the computer work more efficiently. This might be a promising idea. A work room for computer students might help with the interchange of ideas.

Keypunching was available for all full programs. They felt it made better use of the student's time and of the keypunches. They have an algol compiler for the 1130 and have taught short courses in this language (algol is a computer language written with problem solving in mind, not for any special computer). Mr. Hanley felt that algol was a very promising language.

West Ham College is a polytechnic and the computer is in the mathematics department with all departments having access to it. The unit is much like ours but with a plotter which, although slow, worked very good.

The college is housed in a 100 year old Victorian building.

Enfield College of Technology

B. Bowker

Editor of "Computer Education"

At Enfield, they have a large Honeywell System with three tapes, two discs, and a high speed printer. The computer is owned in conjunction with an industry across the street. The computer service department taught a one week crash course to all the students in the college, regardless of their major. However, different majors were given different course content. For one week all of

the courses in a certain major were cancelled while these students were taught computers (this could not be done in our system). However, it is possible some computer work might be added to the orientation program.

The computer department there offered no computer science major; all the courses were service courses to the other departments. No students were allowed in the computer room. Even the instructors had to ask permission to enter. The faculty in the department had various math and science backgrounds and they tried to keep a person on duty at all times to answer student questions on programming. Students did keypunch their own programs. A great deal of work had been done to extend computer education in the secondary school.

They have an analog computer and a Honeywell digital computer is on order to interface with it in order to produce a hybrid system to use principally for simultaneous programs. They thought this was an important aspect. They were having some trouble with the disc packs because of the soft ware orientation towards tapes.

Mr. Tomasso

Glasgow School District-Elementary and Secondary

The computer system was IBM 1130 and was used to teach FORTRAN and SLI (subset of IBM PLI) to students in

the district. There are around 40,000 students in all in the district. The students range in age from 12 to 17. After taking a preliminary course in Fortran or SLI, depending on their interest, they could continue to learn by joining the computer club.

The write-up for the programs the students turned in was very formal, perhaps this was a reflection of Mr. Tomasso's industrial background. The computer was associated with the mathematics department, but he felt this was a mistake. Keypunching was available for the students for full programs but they punched their own correction cards. He also felt that the administration gave him little support. He has a very interesting program that makes the 1130 play music by putting a transistor radio on top of it.

Dr. Jackson
President-British Computer Society
Staffordshire College of Technology

The computer center at Staffordshire was the most extensive that I visited. They have a ICL (British) computer with three discs, tape drives, and three remote terminals. The system sells for 250,000 pounds. The system was entirely for student use and all administration work was done by hand. Although the district bought this expensive computer, they did not provide for any programmers.

Their program was two years of formal college work, one year in industry (mostly with ICL), then one more year of college.

All students took computer work with their first year mathematics course. The language was a subset of Fortran and was simple to learn. The more advanced students used algol.

The local high schools were given access to the computer via remote terminals. The college and high schools are part of the same district. There was also another college in the district that used the computer. Dr. Jackson felt that their program was one of the most complete in British education.

Mrs. Marjorie Barritt
University of Edinburgh

This was a regional computer center and had both ICL and IBM 360 computers. There were many computers in the university as each department was encouraged to have one. The accountant for the college has an 1130 for his own use. The students in the center never run the computers, but punch their own programs. There are 57 keypunches in the center. Mrs. Barritt felt the United States was ten years ahead of Britain in the computer field,

but looking at the Edinburgh system, it is difficult to see. The system was devoted almost entirely to research. The center taught courses in Fortran as well as the university departments. From what I heard from Dr. Jackson and others, Mrs. Barritt is one of the most imporbant people in British computer education.