

Tripreport E.W.Dijkstra, Zürich, 2 - 7 July 1978.

The three of us went by car. For my 17-year old daughter Femke it was a convenient way of travelling to a camping in the French Jura, for my wife Ria it was a 5-day holiday, and for me it was a short lecturing tour. Only after everything had been arranged I realized that I had probably chosen the year's worst weekend for travelling by car through that part of Europe, as it marked the beginning of many summer holidays. Fearing a bad wave of tourist traffic we left on Sunday morning at 4.15. Our fears, I am happy to say, were unjustified: we had our only delays at the Dutch-German border and the German-Swiss border, and those two delays were each less than ten minutes. On the German "Autobahn" --where the traffic can be a frightening catch-as-catch-can!-- people drove fast, but with great discipline; we didn't see a single accident. At 15.15 we arrived at our hotel in Zürich, where we took a nap until dinner time. After a nice dinner, we spent the major part of a beautiful evening walking through a lively city centre, having a coffee or a beer, sitting outside in front of a pub, etc. . In short: we spent a leisurely evening in the true mid-European tradition, observing not without amazement the centre's relaxed and lively evening life outdoors. (We heard the explanation the next day: we had arrived at the first beautiful day after three weeks of rain. All over Europe, spring has been very wet and very cold. We have bought new chairs and a table for the garden, but up till now we have hardly had the opportunity to enjoy them: I am afraid that later 1978 will be known as the year in which we bought our new garden furniture!)

On Monday evening prof.Erwin Engeler gave a party in his home for us and Frank Herary --the other foreign guest who had lectured that afternoon at the ETH -- , on Tuesday evening we were invited for dinner by our host, prof.dr.Niklaus Wirth, and his wife, on Wednesday evening the three of us amused ourselves (very well), and on Thursday morning we left for the French Jura in order to drop Femke at her destination. My wife and I left her in the middle of the evening and drove up to Arbois, where we found an excellent hotel. (In Zürich in Hotel Royal, Femke's single room had been quite adequate, but in our double room the bed had been too small to be really comfortable.) The next morning we drove via the "Routes Nationales" northward, not caring much whether we should reach home that day or not. We drove through the Vosges, through the Ardennes, enjoying the really beautiful countryside as much as the rain would permit. After our evening dinner in Bastogne, Belgium, we decided that there was no point in looking for a hotel, and before midnight we were back home. (The local thieves, I am happy to add, had failed to exploit our absence.) Ria and I looked at the mail that had arrived during our absence and went to sleep at two o'clock in the morning, leaving all unpacking for the next day. We had travelled successfully: in France, only in Metz the road signs had been placed in such a Belgian manner that we missed a turn. (That we also did so in Hasselt, Belgium, was only to be expected.)

\* \* \*

While flying from London to the Bahamas, earlier this year, Niklaus had asked me whether he could invite me for a lecture at the Computer Science Colloquium at the ETH. As a number of years had passed since my last visit to Zürich, I accepted his invitation. I spoke on Monday afternoon, at 16.00 . The proof (and the heuristics for its discovery) as described in EWD640 was on the menu: with on the one hand the engineer Wirth and on

the other hand the logician Engeler on the faculty, this application of formal techniques to a computer science problem seemed to me a most appropriate topic for that audience. (During the discussion I got the impression that my judgement had been correct.) Knowing that it would be quite a job to get the argument across the limelight, I had asked for the opportunity to prepare the blackboard in advance. But it turned out that the lecture hall selected was occupied until four o'clock; besides that the blackboard space was somewhat smaller than I had hoped. As a result it was a tough performance, but I succeeded --I think, even rather well-- : 70 minutes after I had started I had the whole argument written down as nicely as it deserves.

On Tuesday afternoon, at 14.00, I gave a lecture at the IBM Research Laboratory at Rüschlikon. Because I knew that I would address there, among others, the people from the group that had investigated the X.25 protocol by attacking mechanically the result of what I regard as a combinatorial explosion, I showed here the philosophers at the nodes of a network, as an example of what can be achieved by inductive arguments. As I had given that talk a few times before, its presentation gave no problems. I performed in a very nice lecture hall, and the presentation went like clockwork. The remaining part of that afternoon I stayed at the laboratory, where Dr. P. Zafiropulo and three of his associates showed me in greater detail what they had done. It was an instructive afternoon and I was pleased to learn that they had done a decent job: the force applied may have been too brute to my taste, but also their problem was too ugly for my taste! The way in which CCITT had specified the protocol seemed horrible; under that circumstance the discovery of a few loopholes doesn't come as a surprise! I found my impression of "the telephony world" --that adjective is not my invention!-- as a closed, conservative subculture fully confirmed.

On Wednesday morning I joined Ria and Femke on a shopping errand. After lunch I took over Niklaus's last lectures of the semester (for electrical engineers). The less dull students were very much amazed by my way of programming; their amazement confirmed what I had already felt, viz. that Niklaus teaches programming in a style very different from mine.

\* \* \*

My visit to the ETH was for me not as instructive as I had hoped. This was partly due to the fact that Niklaus was very busy: he is director of the Institute, it was the end of the semester --always a hectic time in the academic year-- and on Thursday he would leave for a one- or two-week visit to Great Britain. (He did not tell me where or why he went, we only learned that his wife would join him on the trip; now I know --not from him, but from one of my English colleagues-- that he went to receive a Honorary Doctorate from the University of York!) As a result I did not pump him as effectively as otherwise I would have done.

The other reason is probably that what that group is engaged on now --building a machine for SF 20,000 --has more the flavour of development than of research. It is Niklaus's first venture in hardware development and I can easily believe that it is exciting for him. He feels it his duty to face the confrontation with the thousand little details; for the last ten years I have consciously tried not to get absorbed by them. This is a difference in personal attitude --Niklaus is more the Homo Faber than I-- it may also reflect a difference in academic style between the ETH and the

THE: in Zürich the curriculum is one year shorter than in Eindhoven, the Swiss are more pragmatic than the Dutch and the study at the ETH seemed to me to have more of the flavour of vocational training: the "no-nonsense engineer". I found the place more busy than exciting.

Because the current Dutch government is trying to reduce the length of our curricula and to force us to lower our standards, I was very much interested in the prevailing intellectual climate at the ETH. Taking over Niklaus's last lectures was one of the ways of satisfying my curiosity: it gave me an opportunity to try out what I could do with those students who were now completing their final year. (Niklaus had warned me that, on the whole, they were a dull lot, and he was right.) I am afraid that our government will make a big mistake.

\* \* \*

One thing I learned in Hotel Royal in Zürich: "Hotel garni" means that breakfast is served with music.

Plataanstraat 5  
5671 AL NUENEN  
The Netherlands

prof.dr.Edsger W.Dijkstra  
BURROUGHS Research Fellow