

Trip report E.W.Dijkstra, U.S.A. 12 Jan. - 2 Feb. 1980.

I left home on the sunny wintermorning of Saturday the 12th January 1980. I travelled smoothly --though I crossed the Atlantic with a very talkative neighbour (from Philips)-- and arrived at Ithaca 18 hours after my departure from home. David Gries and Femke were at the gate. David drove us first to Femke's home, so that I could see her room. I gave her all the articles I had for her in my suitcase, and then David and I drove off to his home. There I got the traditional: "a big glass of cold milk, a hard-boiled egg, and a glass of whisky". Thereafter: off to bed!

The next morning David collected Femke --on the same trip on which he bought the Sunday paper-- and she stayed with us for the whole day. Before lunch Femke and I listened to the recording of Wim Kan's New Year's Eve performance that I had brought with me. (After all, she had to know what has happened in our country during her absence, hadn't she?)

The next three days followed very much the same pattern. I would be at Cornell University (talking, listening, commenting or lecturing) until 16.00 when Femke would come; over a beer (or two) we would talk until dinner. On Monday evening we took all the Grieses out for dinner; we had a very pleasant dinner in a Chinese restaurant. On Tuesday evening we took two of (mainly) her friends out for dinner, but that was a disaster: during the night I discovered that the (vegetarian) Moosewood food, besides having been inedible, was also indigestible. The last evening we spent with the Gries family. I took leave from my dear daughter that evening and flew the next morning --in a really miserable commuter plane-- down to Washington.

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In the afternoon I gave a lecture at the University of Maryland. We then went to Washington D.C. for a meeting of the local Chapter of the ACM: cocktails at 18.30, dinner at 19.30, and performance by yours truly from 21.00 to 23.00. It was very hard work because I had to reach a crowd of about 300 people, but all went very well. My hosts took me back to the Center for Adult Education of the University of Maryland, where I had an

excellent night.

On Friday 18th January I gave a one-day seminar --from 9.00 till 12.00 and from 13.00 till 17.00-- for an audience of about 200 people, again under the auspices of the Washington Chapter of the ACM. That was hard work too, and slightly less successful because the audience was very mixed. (This despite the efforts of the organizers who had announced the happening in a way that should have made it perfectly clear to what type of audience I would address myself.) Early in the afternoon I developed with --part of-- the audience the same program I had developed at the Australian Universities, early 1977; down under that example had been very suitable, in Washington it was clearly too difficult for a noticeable fraction of the audience. Apart from that one misjudgement, all went very well. (Before I started I had been introduced by Raymond Yeh to a man from Prentice-Hall. At the coffee break in the morning the P.-H. man came to me in order to excuse himself for the rest of the seminar: "You would make an excellent video tape! You are just like so-and-so!" I had to ask who so-and-so was; so-and-so was the presenter of a famous American TV-show! One gets the strangest compliments....)

The evening dinner was excellent; at 7.45 next morning my hosts were back at the Center for Adult Education, in order to take me to Dulles International Airport, from where I flew to San Diego. The Washington schedule had been very heavy; the very good care my hosts took of me was highly appreciated: I don't know how I could have fulfilled my obligations without it.

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At San Diego Airport I was met by Dr. Lawrence D. Rogers, the General Manager of the local outfit of Burroughs' Terminal Systems Group. After having checked in at the Summer House Inn --the Sea Lodge having been fully booked up as a consequence of a golf tournament in La Jolla-- and having visited the plant, I was taken to his home, where I was introduced to his family and stayed for the rest of the day. On Sunday 20th January we went sailing on the Pacific Ocean. The strong wind prevented us from achieving our original goal of getting a good view of the whales on their trek Southwards; it did, however, give Rogers the opportunity of proving that he was

an excellent captain.

The next three days I worked at the plant. I had two disappointments. Two meetings with people from outside Burroughs had been arranged to take place there, but the one man was not very interesting and the other one did not show up. For the rest my time was well-spent; it was my first visit to that place and the encounter was mutually instructive. On the last day I gave at noon a one-hour lecture at the University of California at San Diego. The room was available for exactly one hour and it was a great challenge to present what I wanted to show --W.H.J.Feijsen's algorithm for the lexicographical minimum from a circular list-- within 60 minutes. I just made it, without losing my audience, and that tells something about the quality of UCSD!

The hospitality of the Burroughs people down there was greatly appreciated --on no evening I had to make do with hotel food-- and it was with some regret that I left them on Thursday morning for the Mission Viejo plant. I was taken there by car and arrived at 10 o'clock in the morning. (From the San Diego plant I had taken with me a list of language rules:

- 1) Each pronoun should agree with their antecedent.
- 2) Just between you and I, case is important.
- 3) Verbs has to agree with their subject
- 4) Watch out for irregular verbs which has crope into the language.
- 5) Don't use no double negatives.
- 6) A writer should not shift your point of view.
- 7) When dangling, don't use participles.
- 8) Join clauses good, like a conjunction should.
- 9) Don't write a run-on sentence you have got to punctuate it.
- 10) About those language fragments.
- 11) In letters themes reports articles articles and stuff like that we use commas to keepthings apart without which we would have without doubt confusion.
- 12) Don't, use, commasa, which are not necessary.
- 13) Its important to use you're apostrophe's correctly.
- 14) Don't abbrev or use contract'ns.
- 15) Check to if any words out.

- 16) In my opinion I think that an author when he is writing something should not get accustomed to the habit of making use of too many redundant unnecessary words that he does not actually really need in order to put his message across to the reader of the piece.
- 17) In re business letter, check it our per jargon.
- 18) About repetition, the repetition of a word is not usually effective repetition.
- 19) As far as incomplete constructions, they are wrong.
- 20) Allways spel coreccly.
- 21) And, last but not least, lay off cliches.)

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When I arrived at Mission Viejo, R.D.Merrell, whom I had not seen for ages, was on the verge of leaving for Pasadena where he had a meeting at noon, but would be free during the afternoon as his plane left LAX only at 19.00 . So I jumped in his car and went with him to Pasadena. During his meeting I had first a quick lunch in the cafetaria of the plant; thereafter I wrote my report on my visit to San Diego. When Merrell's meeting was over we talked until he had to go to the airport; in the meantime John McClintock had come to take me back to Mission Viejo (well, actually Laguna Beach, where I stayed in the "Surf and Sand".)

On Friday we went to the plant where I first asked Donna Spooner to clear up the mess created by the Dutch travel agent, who had booked me on non-existent flights back to the East coast. We worked there the whole day. So did John and I on Saturday afternoon. I spent the rest of the weekend writing until at 16.30 John came to take me to his home for the Sunday dinner. Because the next two days there was no conference room available at the plant, we worked those days in a conference room of Surf and Sand.

Knowing that I would have to leave on Wednesday morning very early for the East coats, I tried to set my body clock forward on Monday evening by going to bed early (i.e. at 22.00). It was, alas, one of my worst nights of the whole trip: after a few hours of sleep I was woken up by a terrible storm whistling through the sliding door that gave way to the balcony. (I

was unable to close it any better.) The sand was silent enough, but the surf was very noisy; my room got very cold and I was shivering. It was only around 6.00 that I fell asleep again. At 7.00 the wake-up call came. We worked all day (I am not quite sure how I survived that day) and felt fully justified when I declined the invitation that reached me at noon to give a lecture at the University of California at Irvine late that afternoon.

Bob Jardine saw me to Santa Ana where I had a hotel reservation near what is now known as the John Wayne International Airport. Though Donna Spooner had said that now "I was all set" we went to the airport, just to make sure. I was, indeed, booked on the flights that I wanted to take. It had been said that at the airport they would take my erroneous tickets and would give me new ones. But the young lady at the counter looked as if I had made an indecent proposal to her "Oh, but this is an international ticket!". Thank goodness I had still enough dollars with me, for the only way out of the mess was buying the new tickets. Burroughs Amstelveen has to get reimbursed for the useless (and hence unused) tickets I had with me. After a pleasant dinner with Bob Jardine I went off to bed. I had several nightmares (about missing planes and the like).

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On Wednesday 30th January I flew via Los Angeles and New York from Santa Ana to Ithaca where I stayed for one more night in Hotel Gries. When I arrived Femke was listening to a violin recital by Heifetz Jr.; afterwards I saw her for about ten minutes, but then her Ithaca life claimed her again. With the Greyhound of 9.00 I went the next morning to Binghamton, where I arrived at 10.05 in order to give my last performance of this trip that afternoon under the auspices of the "Technical Vitality Program" organized by SUNY at Binghamton, some form of Adult Education ("The Recycling of Intellectual Trash") for the employees of the local industries (primarily IBM, GE, and Singer). Of the whole trip this was by far the dullest audience I had to work with. In addition the facilities were abominable: though I had been promised a lecture room with wall-to-wall blackboards, I had to perform in a dining hall in which the people were sitting at round tables at too great a distance from small movable blackboards that had been placed at one end of the

hall --for my "benefit", I presume-- . The audience seemed pleased enough, but I knew that I had given by far the worst performance of the whole trip.

The next morning at 8.30 three faculty members joined me for breakfast in the Holiday Inn. (Since that breakfast I know what "a monument of ignorance" looks like.) With the Greyhound of 10.30 I went to New York. The Business Class of flight KL642 was --quite remarkable!-- only occupied for 30 per cent. and I arrived in reasonable shape the next morning at Schiphol Airport where Ria was with the car. At 8.45, after 17 hours of travel, I was back home in Nuenen. With a cup of coffee I had a first look at the accumulated mail, and then: off to bed!

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I had not realized the severity of the difficulties the Departments of Computing Science are facing in the U.S.A. as a direct result of the boom of the computer-related activities. It is very alarming (and everyone to whom I said so agreed wholeheartedly).

Firstly, the industry is paying such salaries to computing scientists (even to the mediocre ones) that the universities can no longer compete; the battle is now so unfair that many a department becomes "filled with vacancies". Collectively the U.S. industry is killing the goose that lays the golden eggs. (Back home I checked it in the latest issue of the Comm.ACM, and, indeed, more than 100 academic institutions advertise their vacancies in that single issue!)

Secondly, in direct response to the market, the enrollments for computing science are rising steeply. And, if the combination of those two circumstances were not bad enough, the field attracts most definitely the wrong type of students! In the American popular conception computing science is now farther divorced from mathematics than ever. (The pattern of semi-reasoning that leads to that opinion is obvious: economic necessity dictates that automatic computing becomes a major business, hence it cannot be mathematical because mathematics is only for the happy few. It is as simple as that! And for the sake of convenience we are supposed to forget that you cannot solve problems --in

particular not mathematical problems-- by bluntly denying their existence.) As is only to be expected the pressure to make the computing science education more "pragmatic" has only gained strength (see the so-called Feldman report in the Sep. 1979 issue of the Comm.ACM).

Being based on a fundamental mistake, the boom is not going to last. At Cornell University I met Doug McIlroy, who was out there, recruiting computing science Ph.D.'s for Bell Labs. While he was impressed by the improvement of the programming abilities of graduates over the last ten years --and that was nice to hear!-- he made no secret of his greatest complaint either: even the computing science graduate from the best institutes --the second-, third-, and fourth-rate institutes he doesn't visit-- was not enough of a mathematician! (It was nice to hear that at least Bell Labs has seen the light; I was pleased to hear that comment, and so was Juris Hartmanis, the current Head of the Department at Cornell.) He made it quite clear that as soon as managers could find better people and had the courage to employ fewer of them, the boom would be over.

I am very worried about the harm that will have been done in the meantime. On this trip I had the doubtful privilege of visiting a few third-rate institutes and of being confronted with a number of their graduates. It was a shattering experience: I had forgotten how utterly miserable a place a poor university can be! I met a few of their victims: atrophied brains, only able to stir a pool of jargon. It wasn't only depressing, it was frightening, as frightening as only the confrontation with idiots can be.

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