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EWD 513: Tripreport E.W.Dijkstra Newcastle, 8–12 September 1975

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The manuscript was published as pages 165–168 of

Edsger W. Dijkstra, *Selected Writings on Computing: A Personal Perspective*,
Springer-Verlag, 1982. ISBN 0–387–90652–5.

Tripreport E.W.Dijkstra Newcastle, 8 - 12 September 1975.

On Monday the 8th of Septermber I flew --i.e. "was flown"-- from Eindhoven
to Amsterdam in the late afternoon. In the early evening I flew from Amsterdam
to Newcastle; I did so in the company of Goos --now from Karlsruhe-- , whom I
had met in the witing area of Schiphol Airport and who was heading for the same
destination as I: the IBM/Newcastle Symposium. Like nearly all German professors
he talked more about the situations at his university than about his work. He
told me that now they have 700 (!) students in computing science, and I could
only guess, what he taught them. British Caledonian was only fifteen minutes
late and the flight was about as pleasant as flights can be. After landing, the
Newcastle cold surprised us; it would surprise us for the whole rest of the
week.

While the participants at these yearly symposia are always pretty much
the same --as are the jokes of Ewĕn Page--, the subjects are rather different
and the speakers are refreshed accordingly. Last year --Formal aspects of
computing science-- was a "hard" topic, this year's topic --Computers and the
educated individual-- was as "soft" as soft can be, and I would have been
disappointed if I had went with high expectations. On Monday evening, shortly
after our arrival, our hosts Page and Randell were "at home" as usual --at Page's
home, to be precise-- and this informal gathering was quite nice (as usual),
and when all the other guests had left, I assisted (as usual) with the washing
up. Brian and I walked back to "Hotel Randell", where I stayed, together with
Jim Horning. The next morning, the symposium started in earnest, and the series
of one-hour talks started.

Hemming (Bell Laboratories) gave two talks on "The History of Computers
to the year 2000" and "Computers in the Coming Society". I found it very in-
teresting to observe him and to see, what a successful career in big business
can do to an otherwise intelligent man. If he has still the ability to doubt,
he did not show it.

Naur (Copenhagen University) gave three talks, the first two on "An
Adaptable Course of Elementary, University Level, Computer Science" and a
last one on "Problems of Attitudes in Discussing the Computer/Society Relation."
His three hours seemed about twice as much as what would be needed for what he
wanted to tell. All three talks contained relevant information for those who
are interested in the atmosphere of and the prevailing prejudices at Scandinavian
universities today, and it all sounded pretty depressing. The course that he
described was intended to be adaptable to students from various disciplines,
what apparently meant that the medical students would get medical examples,
the social scientists exercises from their field, etc. (I was surprised at
the ease with which he referred to "social scientists": are there any?). It
was made quite clear that, rather than giving definitions "students would be
required to recognize a card punch, when they were shown a photograph of it".
It left me wondering, where the "University Level" came in. In his last talk
I remember him pointing out the danger when the authority of the university
was misused to back opnions favoured by the labour unions --i.e. backed for
that very reason-- .I could not agree more; if it happens, I expect the authority
of the university to fade rather rapidly. (It seems to be doing so already.)

Clark (Washington University) gave three talks: The Basis of Present
Computer Design, Alternative Computing Models, and Developments and Speculations.
(His last one was the only talk that I missed, so I have really behaved myself

quite well!) From the first two I have picked up nothing. The volume of his voice was terribly low, his diction made him difficult to understand, and, besides that, he made the impression of having given up hope, before he started, to cross the gap between his hardware interests and his (mainly) software-oriented audience. Those who have attended his third talk said later to me, that it had been much better than his first two ones. During the closing dinner on Thursday evening I had the pleasure of sitting next to him, and I enjoyed his then interesting company very much --to the extent that I have no memory at all of what we have eaten!-- .

Ms.P.C.Goldberg (Watson Research Center) was the obligatory IBM-speaker (or should I say "speakster" or "speak-person" or "voice"?) with three talks on "The Future of Programming for Non-Programmers." She was terrible, her misuse of English really drove me up the wall. One of my colleagues tried to survive her torrent of nonsense by counting noisewords, such as "simply, sort of, kind of, you know, really, I mean, more or less, OK, that is to say, in some sense, in fact, first of all", and gave up after a total of 180 in 27 minutes. It was impossible to filter them out. But even apart from the noisewords, her language was abominable, even on her prepared transparencies. Of course she used "to execute" --with the subject "program"-- as an intransitive verb, she talked about "implementing answers", wrote about "objects" which in her explanation were "concepts" etc. and was able to state that something --obviously I have forgotten, what!-- was "simply a little bit crucial". My impression is that IBM would love to sell a great number of computer-driven colour TV-screens, and that a number of AI techniques will be used to keep the electrons busy. The need for elaborate man/machine interaction can certainly be enhanced by designing more incomprehensible systems. She was an insult to the audience.

Holt (Massachusetts Computer Associates) gave three talks on "Formal Methods in Systems Analysis" (title to be confirmed). On Wednesday afternoon --during the "excursion"-- he talked to a small group of people at the university. (Because I had been writing that afternoon, I missed it but for the last 25 minutes.) He showed some very nice examples of the relevance of Petri-nets, for instance for the study of the possible behaviour of a consumer and a producer, coupled by alternatively used buffers. And he was very eloquent in arguing that it is a mistake to think that just "bare facts" can be recorded. He is very clearly --and I think: with great justification-- convinced of the nearly all-pervading "relevance" of his considerations, by the time that he then chooses subjects that any course in computing science should contain, I am no longer with him. Should the curriculum contain as a subject "History and structure of the computer industry?". He thinks so. Finally I am greatful to him for having drawn my attention to "the tracking problem". Someone who extracts --or: constructs-- such a beautiful example, must have thought deeply. (In Holt's case it was interesting to observe the great variety in reactions that he evoked from different members of his audience!)

By far the most gifted speaker was F.J.M.Laver, C.B.E., a retired civil servant (from the post office) who gave two brilliant talks on "Informatics and Employment" and "Computation and Democracy". It was an absolute delight to listen to him, light-footed and serious simultaneously, he was the symposium's subject "Computers and the educated individual" become flesh! I shall not try to paraphrase what he said, as it is totally impossible for me to do justice to his performance. I wish that we would have more civil servants of that sort!

There have been three one-hour discussions. The first one did not really get moving. The second one --with the specific topic "What to Include in Courses"-

was not very exciting either, partly because curricula discussions are always depressing, but probably more because its chairman Hamming had already made up his mind many years ago. The last discussion, on Friday afternoon, was a little bit more lively. On Ewen Page's request to stir up matters a little bit, I opened it (with EWD512, that I had been writing on Wednesday afternoon, as soon as I knew that Ewen would like me to present some views).

At various occasions, but particularly during that last discussion, I was reminded of a recent remark by Tony Hoare, that the main difference between the pure scientist and the business manager is, that the pure sicentist has the duty to strive after perfection, while the business manager must make the best choice between the bad and the worse. And, seeing my English University Colleagues, I can only conclude that in England higher education has become big business.... Their problem seems no longer to be what insights to create that should be taught if teaching is to be a worthwhile activity at all; their main problem seems to be wich forms of coloured water can be poured into a glass as if it were wine. And after forgetting for reasons of convenience that this cannot never be done without faking, the arguments start discussing in which semester it should be done, and by whom... Reminding them of their obligations towards perfection is a act of indecency. Depending on my mood I think all this saddening or alarming. (It was only this morning that I realized that with one or two exceptions, I do not know what these professors of computing science are <u>doing</u>! No one talked to me about his work; dwindling travel budgets was a more common subject.)

The willingness to accept what is known to be wrong as if it were right was displayed very explicitly by Hamming --who, as said, seems to have made up his mind many years ago-- . As so many others, he expressed in one of his talks programmer productivity in terms of "numbers of lines of code produced". During the discussion I pointed out that a programmer should produce solutions, and that, therefore, we should not talk about the number of lines of code produced, but the number of lines of code used, and that this number ought to be booked on the other side of the ledger. His answer was "Well, I know that it is inadequate, but it is the only thing we can measure." As if this undeniable fact also determines the side of the ledger....

On Friday afternoon we flew back to Amsterdam; again British Caledonian did so with a delay of fifteen minutes. This time --but we shall not blame British Caledonian for that-- the flight was bumpy. I made the trip in the company of my Utrecht colleague van der Sluis, with whom I talked about a few beautiful proofs and who told me something about the level of the discussions between representatives of the Dutch universities and our Ministry of Education. It is something like "If you believe only half of what I am saying, I am, therefore entitled to lie twice as much."

At eight o'clock it was announced that the Amsterdam - Eindhoven flight was canceled, due to a thunderstorm near Eindhoven, and it was only late that evening when I came home. Saturday morning, while I was having a bath, we had a tornado, and I knew that the summer was no more.

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PS. After I had introduced the msi --milli-split-infinitive-- as the practical unit of linguistic irritation, Brian Randell threatened to name the unit of "grammatical pedantry" after me; I took it as a compliment!