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(GWHS1967)

Recollections of Irwin Hoffman

I. Tom Davis, computer programming, and Hoffy

I met Tom Davis in 5th grade, at Phillips Elementary School in East Denver. He was also a 5th grader, and he lived only 1.5 blocks from my house. My family had just moved to this neighborhood, so I was a new guy at school. We quickly became best friends, as we shared a common interest in mathematics.

We both moved on to Smiley Jr. High for 7th grade, although Tom was skipped ahead in the second semester to 8th grade, and I left there for 8th and 9th grades at a private school, Colorado Academy. We might have lost touch at this point, but we remained close friends partly because of the lucky coincidence of living so near each other.

Over the years, we did practically everything together. We played chess, and ventured to downtown Denver's metro chess club. Tom taught me to play bridge, and we became bridge partners, and entered some tournaments. Tom was always better than me at both bridge and chess. Later, but this is getting ahead a little, Tom joined the swimming team at GW, and I eventually did, too. My family had a cabin near Estes Park, where we spent the summers and some weekends, and Tom visited us there often. We learned rock climbing and took climbing lessons at the Rocky Mountain Mountain Club. In the summers, when we weren't in the mountains, we played tennis every day, and played chess or bridge every night.

Tom went on to his 10th grade year at GW, and I followed a year later, so we were rejoined there, except that we never again had classes together. My 10th grade year would have been in 1964-65.

Sometime in that year, the University of Denver got a new Burroughs B5500 computer. Somehow Tom found out that they were teaching computer programming in Algol there at nights, so, of course, we signed up. There were two instructors: one was a DU professor, named Green; the other was a Burroughs support person (this becomes important later, at least in my life story), named John Skelton. (In those days, the very largest, newest computers, always came with a practically full-time support person, like John.)

My memory isn't firm here, but I think we may have taken this course in the spring of 1965, my sophomore year, Tom's junior year. But perhaps it was the fall of 1966, the next academic year. As far as I knew, Tom and I were the only two highschoolers in the class. We spent hundreds of hours both at DU and at home, writing programs, studying Algol, and more.

We were lucky that John Skelton was a kind and accommodating teacher. [John was Irwin's classmate when getting his PhD; his acceptance of GWHS students was a favor to Irwin.] As Tom and I excelled quickly at programming, we peppered him with many questions. Eventually (maybe to shut us up for a bit), he gave us some treasured documents: a Burroughs manual on Espol — the wizzy Algol-based programming language that was used for writing the operating system (called the Master Control Program or MCP), some snippets of code from the MCP, and the entire source code for the Burroughs Extended Algol compiler (which was, of course, written in Algol). We were ecstatic, and we read every line of code in this compiler.

Tom and I went on to collaborate on a chess-playing program (this was probably the following year), and a “dating” program, which would match up boys and girls (based on data from a questionnaire) as dance partners.

But I digress...

At this point, Hoffy enters the picture, at least for me. Tom may well have known him earlier.

It turns out that, in spite of my (and Tom’s) love of mathematics, I took only three years of Math at GW. They offered, and I took, a lot more science classes. The three classes were: Geometry (10th grade); Trigonometry and Analytic Geometry (11th grade, taught by Vaughan Aandahl), and Calculus.

Hoffy was the “main” teacher of Calculus at GW, and I suppose Tom took Calculus from Hoffy. I eventually took one semester of Calculus from Hoffy (fall of 12th grade), but due to a scheduling conflict, I took the second semester from Mr. Jeffries.

The point is that Tom probably met Hoffy at the beginning of his Senior year, the fall of 1965. You’d have to ask Tom to fill in the details, but Hoffy was interested in programming (it was so new and exciting!), so at some point, he joined us at DU some nights. Since Tom and I were “old hands”, we naturally tutored Hoffy in Algol. We were a whole semester (or a little more) ahead of him in this, and we had read the Algol compiler!

II. The Computer Study Hall

I don’t remember the details, but one thing led to another, and Hoffy set up a “study hall” in the spring of that year (1966) in which a total of four students were enrolled, which Hoffman taught during his lunch hour (he had to get permission to eat lunch in his room): Tom and I and two younger students.

This study hall was really an Algol class. Tom and I taught, Hoffy and the two other students tried to learn from us. I’m sure it wasn’t easy! Tom and I would both stand at the blackboard at the same time, scribble Algol and diagrams of data structures all over the boards (simultaneously), and complete each others sentences. Hoffy was trying hard to keep up, and he tried to slow us down, but Tom and I were on a tear. It was so exciting that Tom and I had difficulty going slowly. Somehow, eventually, Hoffy and the two sophomores learned some Algol.

The next year, Tom went off to Caltech, but the computer study hall continued. Hoffy and I taught it, with contributions from other students. We had 43 participants, in a room built for 30.

This study hall became very successful, and I hear that Hoffy continued it after I left. I recall that, a year or two later, while I was away at college, my mother sent me a clipping from a Denver newspaper about this amazing, innovative computer programming program that they had at GW.

III. My life after GW

After I graduated from Harvey Mudd College, in June of 1971, I returned to Denver. I knew what I wanted to do — I wanted to become a professional computer programmer. I called up John Skelton, who was still in Denver, and asked him for advice. He introduced me to the branch manager of the local Burroughs office, and I got a job interview. Soon, I was working there, doing the same job that John had done for DU four years earlier — providing software support for Burroughs customers. I even served as the support person for DU, but by that time, DU didn't need full-time support. I have enormous gratitude to John Skelton, both for providing me with this introduction, but even more for the kindness and patience that he showed to Tom and me a half dozen years earlier, which was key to getting me hooked into both computer programming in general, and specifically to Algol and Burroughs computers.

Just a couple of years later, I was transferred to San Diego, where I really emulated my mentor, by taking over as the on-site software support person for the very new, very large, Burroughs B6700 computer that was installed at UCSD. Eventually, I moved from there into the Burroughs software development team in Mission Viejo, CA, where I worked on both the Algol compiler and the MCP. I stayed at Burroughs for 13 years, and I retain a love for Algol and the Burroughs computer architecture.

IV. Thoughts about Hoffy

Three words come to mind when I think of Hoffy: dedication, enthusiasm, and inspiration.

Hoffy was one of those teachers that you could not help but like. His eyes literally twinkled with enthusiasm. It was inspiring and infectious. He was just fun to be around.

As a teacher, he was very thorough, methodical, careful, and precise in his use of words, examples, etc. Yet he didn't plod along — he always exuded enthusiasm for his subject. I'm sure he must have worked hard at his pacing so that his enthusiasm didn't cause him to race ahead too fast. I saw this only in hindsight, and I was a poor student of this, as Tom and I raced along in attempting to teach Algol.

But his enthusiasm came through, no matter what the pace of the Calculus lectures. And it came through even more strongly in his role as a student of Algol. Hoffy desperately wanted to learn this stuff and to keep up. Sometimes his frustration with us, our speed and our lack of any teaching technique, must have seemed unbearable. But he always kept at it with enthusiasm and intensity, and good humor, and he gently guided us back to the main point when we would ramble off in some side direction. And, of course, once he understood a concept, he helped us explain it to the other students in much better ways.

Hoffy was dedicated to his students and to teaching. I'm sure this was clear to his Calculus students over the years. And his championing of the Computer Study Hall was just another example. I'm sure we never fully appreciated the time and effort he put into this. It was an outstanding experience for me, probably for Tom, and I would expect for all of the students who passed through it.

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