

As a kid, I had always been fascinated with electrical gadgets, having spent hours putting in my basement taking apart any manner of radio, TV, tools, appliances to see what made them tick. Sometimes I would find out, sometimes I would get them working again. I thought I was going to be a scientist, probably a physicist, when I grew up. I was going to invent things, make things, figure things out.

When I got to college, I began to fulfill that dream. My advisor thought the advanced calculus course would be just right for me, along with a physics course.

The calculus course was taught by a professor with, I suppose appropriately enough, a strong German accent. He was courteous enough, I recall, and naturally rigorous about the material. From the first day, I knew this was going to be a challenge.

I started the physics course with enthusiasm: after all, this was to be my major field. I soon came to realize that my basement futzing with gadgets was not what college physics was all about. Fantasies of wearing a white lab coat, hooking wires up to machines, pressing buttons, watching lights flash, scopes wiggle and the obligatory wheels turn, met the realities of taking notes in a lecture hall about the mathematics of harmonic motion.

I hadn't realized until that fall that real physics meant math, and, though I had always done reasonably well with math courses till then, math simply wasn't very high on my thrill scale.

The advanced calculus course became my first encounter with the Dark Side. At one point, so many students failed an exam that the professor had a preparatory session in which he provided all the questions and explicitly, carefully, thoroughly provided all the answers to a make-up exam to be held the next day. He pointed out that anyone who got all the answers right could get no higher than a B since they'd already taken the exam once before. I had been away on an excused absence for the first exam so my maximum grade was not restricted. I saw this as an opportunity to help compensate my disastrous scores to that point. I spent the night writing and rewriting the answers; at least I would memorize them if I didn't understand them. When the exam started I confidently began regurgitating the answer to the first question but hit a snag about half way through and, using my best examese, told myself to go on to the next question, that I would recall the rest of the proof later and simply go back and finish the question. I hit a snag a little sooner in the second question, and dutifully went on to the third. I found myself hitting snags earlier and earlier until I lost all cool and went into a crescendoing panic. How could I blow this? I scolded myself, after studying so hard. I did.

I got a B something in the physics class but felt I had sweat blood to get it. The math class was a disaster. I didn't drop the class—I didn't know you could do that. The grade destroyed my g.p.a. More importantly the experience of both classes destroyed my vision, my route to the only dream I thought I had.

I picked another major.

Two years later, during the last few weeks of my senior year, the college obtained its first computer. It was available to students and though I knew absolutely nothing about it, there was something that kept calling me. Was it echoes of Rocky the Robot in the Forbidden Planet, Captain Midnight, Flash Gordon? One evening I found myself hanging around a cluster of students who seemed to know what they were doing, running cards through the machine then back to their desks with printouts, onto the keypunch machines, a shuffle of the card deck and another go at the card reader. Well, it wasn't a lab with chemicals swirling in bottles, Jacob's ladders zapping electrical arcs into the heavens, giant switches on the wall ready to bring life into some poor exhumed body, but it had the excitement of boiling creative juices, of power, of a pact with something energizingly magical. I looked over shoulders, asked a few questions, and, with a prescience unknown to me at the time, looked for something *to do* with this machine. I had an old Volkswagen bus at the time, and determined I could make a crude tachometer by calculating the engine speed from the speedometer, using the gear ratios in the transmission. Then, by knowing which gear I was in and reading the speed I was traveling, I could look at my table and know what the engine r.p.m. was. This may have been one of the first cases of looking for a problem to solve with a new tool rather than looking for a new tool to solve a problem, a common phenomena in the computer world; give a kid a hammer and all the world's a nail. Of course, calculating all of this by hand seemed a complete waste of time and besides, the point was to get the computer to do it, to make it work!

I knew nothing about programming, but somehow picked up enough that evening to write the program to make the r.p.m. tables and, perhaps through the grace of having chosen a simple problem, it worked. I had other things to finish up during the remaining weeks of school, so I never went back to the computer center to further pursue my fascination. That summer, my family (I was married and had a toddler) moved to the west coast in order for me to begin graduate studies. I had committed myself to a program in urban planning, mostly on the recommendation of a few men whom I trusted and I figured I'd talk myself into liking it once I got there.

Like many other graduate students, I needed a job. I quickly found the student employment office and scanned the 3x5 cards offering everything from driving trucks to painting houses. One card announced a computer programming job at a university facility called the "Urban Data Center". There was a job driving a truck for a furniture place which I figured I could do, but the computer job, about which I knew as much as I knew about neurosurgery, hung there burning a hole in my rationality.

A few minutes later I found the UDC and asked for a job application form. After I filled it out the secretary asked me to wait a minute. She took the form down some corridor. A few minutes later I was invited into the head professor's office for an interview. Things get foggy now, probably because they were foggy then—there were two professors in there, asking me what I knew about computers, telling me that the job I had applied for had been filled.

But the Center had just received some grant money and needed a research assistant to manage the project. It meant more money than the programming job, it meant staff status

at the University, it meant I would pay in-state tuition only, it meant I would be lining myself up for further research work at the university, it meant that I would be designing, as well as preparing, computer programs. Was I interested?

I don't recall many questions about my background. (I do remember that I did not say anything about my only evening with the college computer.) The lead professor was impressed with the college I had attended. The computer for the research project was not there yet. It was to arrive in a few weeks. I could take home some manuals and brush up on the machine before it arrived. Would that be acceptable?

I found myself walking out of the building, having accepted the position, assuring the professor, his assistant, and myself that this arrangement was indeed quite acceptable. I was carrying several manuals, each the size of the NYC yellow pages.

When I got home I tried reading one. The only words I recognized confirmed that it was written in English. I grabbed another manual in hopes of relieving this lightheaded, blood-rapidly-draining-from-the-higher-consciousness-levels feeling. After perusing it quickly, I dug myself an even deeper grave. Awareness of what I had done didn't creep in, it raged in like a giant slobbering Spielberg special effect. These guys think I understand this—they expect me to do this, I realized. I can't even figure out how to turn the damn machine on, much less actually do something. I'm in very deep bandini, I assured myself. I can't believe you got yourself into this, I spoke to the walls. What am I going to do? Call them and tell them I lied? That'll look good for my opening move in graduate school.

I tried reading the manuals several times under the theory that I'd pick up more and more on each pass. That turned out to be as effective as reading Sanskrit.

If I had been thinking about the metaphors of dark forests, trolls, dragons, gold balls, knights and peasants, I would have seen myself in a fairy tale of my own making. I had just graduated cum laude from a prestigious eastern college, so I was supposedly smart. I had just talked myself into a job which had a good future, gave me a higher income than I could have expected, saved me tuition money and was in a field I was fascinated by, so I must be clever. Why did I feel like an idiot? I hadn't done anything this dumb since I had participated in my first, and last, piano recital when I was 10.

I decided that my only recourse was to get in there and figure it out, as quickly and noiselessly as possible. Fortune smiled on me in the form of a computer jock who had also been hired for another project but who, when he wasn't bouncing off the walls pretending he was a mountain climber (there were petons and flags stuck near the ceiling in various holes in the concrete block walls) deigned to show me a few things. I was a rapid understudy, driven by the fear of failing, along with a steadily growing fascination with this new power, these new mysteries.

That summer I used up a lifetime supply of trial and error. The electrons must have braced themselves for yet another jolting ride when they saw me coming up to the

computer again and again. I gave new meaning to the phrase that begins "if at first you don't succeed..." I wound my way through graduate school, financing my family with research assistantships and consulting, all based on programming a computer. Yet through all of this, I did not take a degree in engineering or computer science. Perhaps I was gun-shy from my college experience to try another run at physics, and in any case the fire from the computer work I was doing was hot enough to keep my juices flowing. In my own clover, the grass didn't look greener anywhere nearby.

I've never really pondered what possessed me to follow the sequence of steps that led me into, and then through, that dark forest. I didn't have to listen to the siren song of the 3x5 index card, nor move to the application, nor the interview, nor the acceptance. It was a seduction. I seduced myself. I could easily have been labeled a fool for having done this, and yet I followed the path with heart. It was as close as I had ever come to following the fascination I'd always had with machines, electricity, tools, making things—and taking them apart.

That index card represented yet another in the series of choices that are constantly being offered to me. I have come to view these opportunities as being offered by 'the world' or 'the universe'. It's as if I am playing cards with a dealer, a.k.a. the universe, and she deals me a fresh hand every day, maybe every minute—some would say every breath. Sometimes I get aces, sometimes I don't even get a pair. I never know whether to hold my cards or turn some in for new ones off the deck. I view the game as one in which what counts is my ability to keep playing, with wit, grace, humor and some spice—it's not what you get, but how you play.

How I play is not smooth—no James Bond at Monte Carlo here. I have to remind myself constantly that whenever I get a hand that seems to have nothing, I've got to keep on playing, to say "Let's see where this goes?" rather than "Damn, look at these lousy cards!" Having lousy cards leads me to think about giving up, but I'm trapped: I can't give up, there's no one, no place, to give up to. Giving up means to become one of the living dead, the catatonic who walk the malls, set the average for hours per day of television viewing, live Thoreauian lives of quiet desperation.

Yo! I'll see yah and raise yah five.